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ABSTRACT

Presented are thirteen selected papers focusing on the relationship of special education to regular education. The first short paper explains the purpose of the conference, while the next three papers discuss various aspects of mental subnormality: that many cases of mental subnormality result from prenatal famine, that mental subnormality resulting from deprivation in the existing society is society's achievement and challenge, and that factors in reproduction relate to mental subnormality. The following paper examines learning disabilities in terms of why a child cannot learn and minimal brain dysfunction. Then discussed are the special education/general education interface and the integration of professional training. A symposium on discontinuity in general education/special education reviews topics related to the realization that a basic problem is the educator himself. Papers on the reintegration of training and a model for the operational implementation of educational research and training in the classroom are than presented. A symposium on strategies, models, and ideas for action in western colleges and universities considers topics such as teacher education and student placement. Rap session comments on conference topics and explanation of the mutual goal of special and regular education are provided last. (CB)

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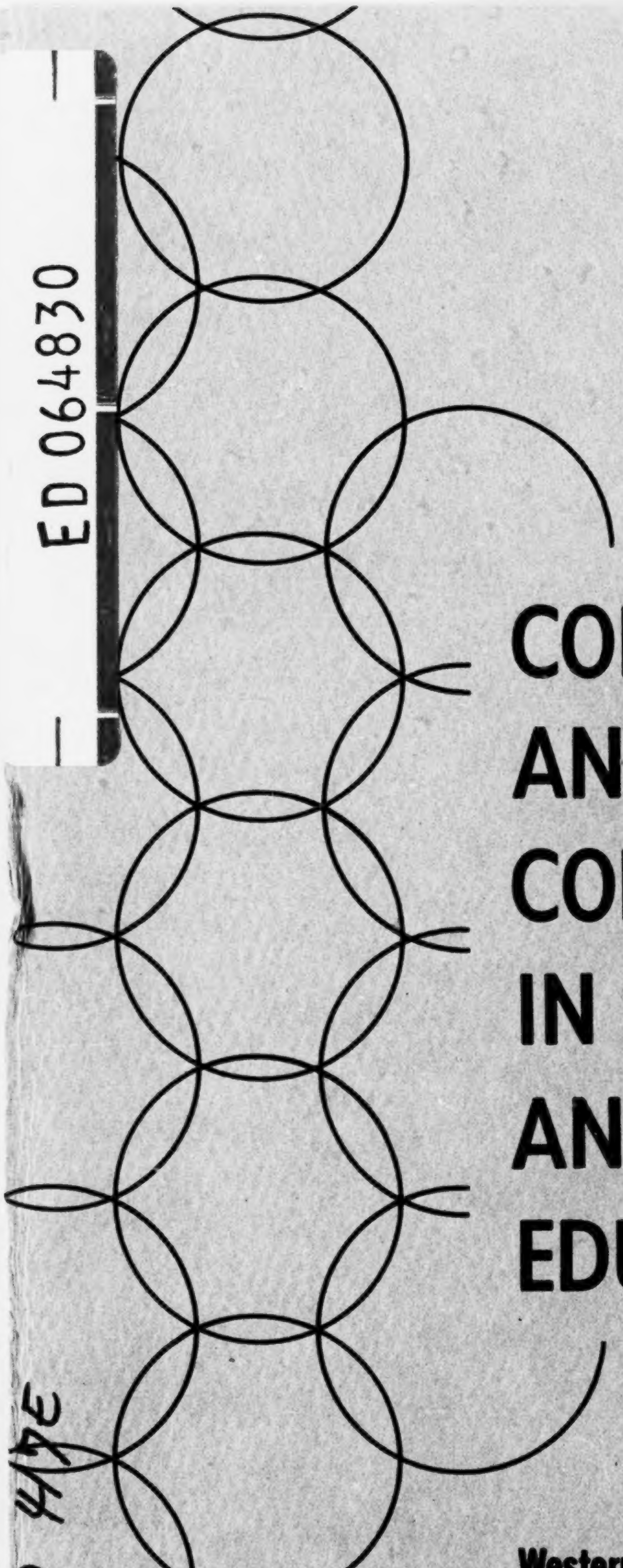

CONTIGUITY AND CONTINUITY IN GENERAL AND SPECIAL EDUCATION

Western Interstate Commission
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CONTIGUITY and CONTINUITY IN GENERAL AND SPECIAL EDUCATION

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Edited by
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FOREWORD

The American education system is being challenged to an extent it has never experienced before. Although there have been efforts to provide equal educational opportunities for all children, many exceptional children are not being adequately served by the schools. This is especially true in inner-city and remote rural areas where the "special class model" for providing services is sometimes found to be inappropriate.

Emphases in higher education in the past have not been placed on the preparation of general educators for the special education aspects of their work. One means of correcting this is to implement and revise teacher training programs. Such an emphasis will: (1) cause teachers and administrators to seek and obtain the assistance needed to educate exceptional children in the regular classroom; (2) reinstate special education as a dimension of general education; and (3) foster a change in attitudes of all educational personnel toward deviant children.

It was the purpose of these three conferences to initiate and continue a dialogue concerning the relation of special education to general education, between special educators and teacher-trainers in colleges and universities, and among key agency, community, and higher education personnel in the western region. The conferences were designed to stimulate voluntary planning and coordination among program personnel in the West who now provide or anticipate offering special education training to regular teaching personnel. Specifically, these conferences provided a well-prepared arena for knowledgeable general and special educators to discuss and evaluate issues concerning the contiguities and continuities in General and Special Education services in the West.

Nearly two hundred participants representing western institutions, agencies, and local schools were in attendance for the full conference period at one of the three conferences. The quality of the participants' interactions and the excellence of the papers presented attest to the importance given to this conference by those who attended. It is hoped that these published proceedings will serve to stimulate additional study, research, and action concerning the relation of general and special education throughout the nation.

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CONTIGUITY and CONTINUITY
IN
GENERAL AND SPECIAL EDUCATION

THE PURPOSE OF THE CONFERENCE

Dr. James A. Bradshaw

The title, "Contiguity and Continuity in General and Special Education," could be an awesome, misleading, and overwhelming collection of words that have little meaning unless placed in their proper perspective and context. The contiguities in general and special education are those elements which touch both general and special education.

In the West, special education constitutes a relatively new dimension of general education. However, as in other regions, statutes, supporting regulations, and guidelines mandate that states provide programs for children with physical, mental, and emotional disabilities and impairments. The term "special education" can relate to many different problems. Conditions involving emotional disabilities, cultural disadvantages, physical and mental limitations, and complex learning disabilities might all be covered by this term—even the education of unusually talented or gifted children.

Dunn, Kirk, and other special educators throughout the United States have identified these types of exceptional or handicapped children who could and should be involved in the local public schools: educable mentally retarded, trainable mentally retarded, speech impaired, deaf and hard of hearing, blind, and partially seeing, crippled, other health impaired, emotionally disturbed, socially maladjusted, and specific learning disabled. The latter three categories are sometimes referred to as the educationally handicapped. Most of these categorical labels are derived from medical models and have little relevance to the particular learning problems or educational programs. Stephen Lilly (1971) offers a new definition of exceptionality which changes the

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emphasis from exceptional children to exceptional situations in the school. His definition is as follows:

> An exceptional school situation is one in which interaction between a student and his teacher has been limited to such an extent that external intervention is deemed necessary by the teacher to cope with the problem.

His basic message is that we must change both how we think of children labeled as exceptional and how we perform in regard to their educational process.

More than one million school children and youth in the West need special education services. Of these one million children, almost 620,000 receive no special help with their learning difficulties, not even a part-time program. The children are many; special programs are few.

As in other sections of the nation, western states have experienced difficulty in determining the number and characteristics of "exceptional" children in their region. They have had difficulty in establishing appropriate numbers and types of training programs to prepare teachers and others to meet the educational needs of these children. There are numerous problems and contiguities associated with planning for services, developing curricula, defining training needs, and expanding programs. Many of these problems, particularly those related to professional training, have regional significance and might be solved or significantly reduced through concerted regional action.

Although the number and variety of educational services for exceptional children in the western states have steadily increased, the majority of the handicapped children will continue to be served by regular elementary and secondary teachers.

Regular classroom teachers have always been confronted with large numbers of exceptional children in their classes and in recent years have been faced with increased numbers of children whose learning problems exceed their knowledge and understanding of ways of coping with these conditions. In 1955, Kough estimated that as many as one-third of the children cared for by elementary and secondary teachers have special abilities or special needs which require unusual attention. It is clear that while many schools, particularly in the urban areas, now have special classes, only a small percentage of exceptional children are served by these means.

Taking into account the expanding school-age population in the West and the limitations of many of our present administrative arrangements for providing special education programs in some geographical regions (e.g., special education classes and schools in sparsely populated areas), the shortage of special education services is likely to continue. Further, even if it were possible to provide sufficient numbers of teachers prepared to serve children with special learning problems in special class settings, some states and local districts would be faced with major financial problems in expanding special classes or schools.

Providing effective educational services for exceptional children is everyone's responsibility. It is *not* merely the responsibility of teachers and administrators of special class programs. In a culture where more than 30,000,000 persons can be considered handicapped, gifted, or unusually talented, and where educational handicaps or learning disabilities are often severely complicated by poverty, prejudice, or neglect, special education cannot be interpreted in such narrow perspective.

Although many western states have made progress in providing services for exceptional children (e.g., developmental centers for handicapped minors, pre-school programs, special classes, work-study programs, and post-school programs), exploding and transient populations, inadequate legislation, teacher shortages, poverty, sparsity, and highly concentrated urban populations could prevent them from carrying out the educational program to which educators are committed, *particularly through existing patterns of service.* Each state presents some common as well as some unique special education problems. These problems are not likely to be solved unless more effective means of involving regular elementary and secondary personnel in special education matters can be found. What appears to be needed is a better link between special education and general education at the public school level, and between the general educator and special educator at the university or training level.

The input sessions were designed to discuss the environmental, ecological, societal, and other institutional influences and forces that contribute to or facilitate what happens to children. If we are to be successful in our intervention, prevention, and amelioration of deprivation that results in children with handicapping conditions, we must be knowledgeable about the living conditions and reproductive patterns that are responsible for such deprivation.

U. S. Commissioner of Education, Sidney Marland, Jr., has set as one goal of the U. S. Office of Education the provision of educational opportunities for every handicapped child in this country by 1980. If we are to accept the challenge and dilemmas of providing special education services to the 60 percent of the handicapped children not receiving them, we must explore and develop more effective service delivery systems. Many of these children with the support of part-time special education services could benefit in the regular classroom. This will require a commitment for better coordination, cooperation, and communication at the federal, state, and local levels. People must be involved at all levels if a change in attitude and action for future change are to take place. This study of contiguities and continuities in general and special education is an attempt to develop an interface between special education and general education for these exceptional children who are conceived, deceived, and disillusioned.

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MENTAL SUBNORMALITY:
The Result of Prenatal Famine

Arthur T. Fort, M.D.

During the twenty minutes it will take you to read this article, four more mentally retarded children will be born. In just five years, they will look to you for some sort of educational experience.

One of these four is mentally retarded for some clearly demonstrable cause. The cause might have been an enzyme defect such as a lack of Hexosamine-A that is seen in amaurotic-familial-idiocy or Tay-Sachs disease, or a derangement of chromosomes as seen in Down's syndrome or mongolism, or a maternal infection such as rubella or German measles, or a blood incompatability between mother and fetus as is seen with the Rh problem, or the baby may have positioned itself improperly for birth, resulting in a birth injury. The known or suspected causes exceed one hundred in number and tend to be spread more or less evenly throughout our society, affecting rich and poor alike.

The other three mentally retarded children born during these twenty minutes are quite different from that one child, however, as no demonstrable cause for their retardation is evident. Furthermore, these children are not found evenly distributed over the entire population, but are densely concentrated in the lower one-fourth of our population socioeconomically (1) and in some way are related to poverty (2). Is this concentration of mental retardation in the lowest quartile of our population a result of a similar concentration of bad genes in that group; or is it because the genes were normal, but were denied the opportunity to develop their full potential? In answer, all of you can

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probably remember classic lower-class families depicted in high school civics or social studies who generation after generation produced mentally incompetent and sociopathic offspring. But no doubt you can also remember that the same lower class generated a number of great educators, scientists, physicians, industrialists, financiers, military leaders, statesmen, and even a president or two. In fact, the bulk of the settlers of our great nation were escaping poverty in Europe when they emigrated to America. Had they been on top they would never have left. Therefore, it is very unlikely that the concentration of mental retardation in the lower quartile of our population follows from a similar concentration of bad genes. It is much more likely that the genes of the lower quartile are normal, but may have been denied the opportunity for full development of their potential. Furthermore, this restraint of development appears to be inherent in the reproductive process rather than caused by poverty itself. Otherwise, how could so many bright people have emerged from very low class origins?

The culprit, operating within the reproductive process to retard development of potential, prenatally at least, is none other than poor intrauterine incubation or *prenatal famine*. One finds this prenatal famine concentrated in the lower quartile of our population because certain reproductive characteristics contributing to poor incubation are likewise concentrated among the poor. These reproductive characteristics are: (1) beginning reproduction too early in life, (2) reproducing too soon after previous birth, (3) reproducing too many times, and (4) living a life style that excludes prenatal care and good prenatal nutrition. Such allegations, being strong, deserve support. I intend to provide that support in the remainder of this article. A sequential article will suggest how the culprit, prenatal famine, can be apprehended and prevented from the cruelest of all thievery, the theft of human potential: the "great brain robbery!"

Support for these allegations must begin with a brief review of the purpose of the gestation period, i.e., the period of intrauterine incubation. Simply stated, it provides a time and place for the expansion of one cell, formed by the fusion of egg and sperm, into a baby capable of independent existence—a truly miraculous event! Our incubation period lasts approximately nine months. The first three months are devoted largely to cellular proliferation and differentiation, a process wherein the fetal cells separate into specialized tissues such as nerves, skin, bone, muscle, etc. The remaining six months are spent almost entirely on further proliferation of the already well-differentiated fetal tissues. The most obvious result of all this proliferation is growth, a process that continues far beyond birth. The rate of this growth depends on two essential forces: (1) the inherent growth potential of the fetal tissue and (2) the supply line to the fetus. This can be depicted graphically if growth potential is plotted along a horizontal axis. A vector between the two forces results in a diagonal linear growth curve. If either the growth potential or the supply line becomes rate limiting, the growth curve will begin to plateau. For most of us, our growth potential eventually becomes rate limiting and we cease growth in our late teens. Only our fat cells seem to maintain their unlimited potential for growth for as long as we live.

If a point on the horizontal axis is chosen to represent the birth date, and a perpendicular is extended from the point through the growth curve, the point where the perpendicular intersects the growth curve would represent birth weight. Ideally, the birth weight should range between 7½ and 8½ pounds after nine months. A lesser birth weight would indicate that a plateauing of the growth curve must have occurred, almost always indicating that the supply line became rate limiting. Growth potential rarely becomes rate limiting during early life; witness the manner in which well-fed newborns gain one to two ounces daily. The rare exceptions would be when the cellular growth potential was genetically defective or had been attacked by an infection such as the rubella virus. In such cases one sees lack of growth potential persisting after birth as well. Therefore, the supply line, not the growth potential, is almost always responsible for putting the brake on growth when a baby is born undersized relative to the period of gestation. In other words, there was prenatal famine.

It is important to reiterate that a well-nourished baby may be of low birth weight from having been born too soon, having been evicted at a point earlier on the growth curve than 7½ to 8½ pounds. This should not be confused with prenatal famine. Whatever the cause, when a baby's birth weight falls below normal to 5½ pounds or less, he is called "premature." Confusingly, this word may apply to a baby of low birth weight because of prenatal famine or to a baby of low birth weight because of having been born too soon. Unquestionably lumping the two together extends confusion to follow-up and prognosis about future development since only 30 percent to 50 percent of prematures are truly growth retarded or famished prenatally. It must be acknowledged, nonetheless, that all prematures represent faulty incubation since premature eviction is also a partial failure in the gestational process when insufficient time was provided for maturation of the unborn.

If birth weight, remembering it as commonly a reflection of prenatal famine or prenatal feast, is correlated with future capacity for intellectual performance, neuromuscular development, and perinatal survival, a striking pattern becomes evident. The pattern shows that the greater the birth weight, the greater the chance of success in these categories. Admittedly the pattern is much more evident at the extremes. One can point out notable exceptions. Intellectual performance can only be roughly qualitative, and the circumstances into which a child is born also contributes strongly to ultimate success; but the correlation is undeniable. To avoid obfuscation, one rare exception to the "the bigger, the better" correlation must be singled out for mention and that is the oversized baby one sees in association with diabetes mellitus. His oversized condition reflects an underlying maternal disorder, and, during the prenatal period, he does less well than the normal child. The same can be said of the swollen hydropic baby seen in blood incompatibility.

To cite some of the evidence on which the "the bigger, the better" correlation rests, I will first mention an observation by Porter (4) who in 1893 noted that in nongraded classes in St. Louis public schools, the taller and heavier children tended to gravitate to the upper-level grades despite age. From that Franz Boas (4) concluded that there seemed to be a common denominator between mental and physical development. Years later Terman (5) designed his study of gifted children found in California schools. He found them to surpass nongifted children in physique as well as intellect. He followed them into middle age noting that they had fewer illnesses than had the controls and continued to maintain their superiority in physique and intellect (6). Admittedly, this superiority must be related to nurture after birth as well as before because two of Terman's co-workers, Laycock and Caylor (7), found that the association between physical and intellectual superiority lost significance within families. Tanner (3) more recently reexamined the relation of body size, intelligence test scores, and social circumstances in children and adults and once again found an imprecise but unmistakable tendency for upper-class individuals to be taller, brighter, and better able to limit fecundity. Knobloch and Pasamanick (8) reported the results of a long term follow-up of prematures compared with normals. When birth weight was used as the basis for separating the subjects into those weighing less than 1000 grams (1.9 pounds), 1000-2500 grams (2-5½ pounds), and greater than 2500 grams (5½ pounds), defective intellectual functioning emerged in 17.6 percent, 1.8 percent and 1.6 percent respectively. Minimal cerebral damage was found in 22.8 percent, 16.0 percent, and 10.0 percent respectively. Neurologic abnormalities sufficient to threaten future development were present in 26.3 percent, 8.2 percent, and 1.6 percent respectively. Prematures continued to be shorter, lighter, and experienced 55 percent more illnesses. In another report Knoblock (9) stated that 50 percent of the children weighing less than 1501 grams at birth eventually showed intellectual or neurologic defects.

Wiener (10) compared measurable indices of neurologic development selected to detect minimal deficit in 500 low-birth-weight infants with 492 controls matched by maternal age, race, season of birth, and socioeconomic class. Impairment increased as birth weight decreased becoming unmistakably significant below 2500 grams (5½ pounds). Wiener (11) in an extensive review of the psychologic correlates of premature birth found that the overwhelming preponderance of studies showed the now familiar pattern—"the bigger, the better." He quoted one study of children weighing less than 3 pounds at birth wherein 31 to 45 preschoolers were found to have I.Q.s of less than 90, and of 24 from this group who continued on to school, 21 fell below 90 I.Q. Females seemed better able to catch up than males, probably because they are expected to weigh less at birth by virtue of their sex. A cleverly contrived study by Scarr (12) compared 61 pairs of identical twins, all females. When their birth weight (a clear indication of the prenatal feast or famine since the genetic potential for growth was identical) was correlated with I.Q., the larger twin surpassed the smaller, especially if a difference of greater than 500 grams existed.

Baird (13) evaluated the I.Q. of school children born in Aberdeen, Scotland, weighing between 4 and 5½ pounds at birth. He then divided them into those born more than four weeks early and those born within four weeks of full term. The children born more than four weeks prior to term surpassed the others. Doubtless, spending those weeks outside the maternal incubator with a substitute but adequate supply line was beneficial. Further citations on birth weight and ultimate intellect are readily available in the literature.

Alm (14) contrasted the adult social adjustment of 759 singleborn prematures with 981 controls and found 3.5 percent of the prematures were severely retarded compared to 0.7 percent of the controls. Another 4.8 percent of the prematures were less severely retarded but required institutionalization compared to 1.2 percent of the controls. The significance of proportions of human injury attributed to prematurity can be better appreciated if it is pointed out that the incidence of prematurity among our population ranges between 5 and 10 percent. Therefore the number of premature affected should be multiplied by at least ten to get a proper perspective for comparison with normals.

If we now leave intellectual and neuromuscular development and social adjustment to look at capacity for perinatal survival, the "the bigger, the better" correlation is no less evident. This is true even when such survival rates are adjusted for socioeconomic class, maternal age, role, etc. Eighteen nations surpass the United States in perinatal survival, and the only plausible reason for this unenviable position is our similar standing in birth weight statistics (15). When perinatal survival in Sweden, which enjoys the best comparative position, is viewed alongside ours, the correlation between lower survival and lower birth weight is even clearer: our prematurity rate is 8.2 percent, while Sweden's is 4.4 percent (16). Eastman and Jackson (17) found the neonatal death rate four times as high in children weighing less than 5½ pounds at birth when compared to larger neonates. Van Den Berg and Yerushalmy (18) in another large study found the same.

Finally, even the ability to complete high school seems to be related to birth weight. This was reported in a cleverly contrived study by Harmeling and Jones (19) who compared the birth weight of 39 high school dropouts from an all black high school with matched former classmates who were either slow learners or normal learners. The average birth weight of the normal learners exceeded that of the slower learners whose average birth weight had exceeded that of the dropouts.

How much longer can we allow so much human potential to be squandered by prenatal famine? How much longer can we watch this great brain robbery without getting involved? In a subsequent article I want to tell you how this heinous crime is committed. I want to tell you how it might be stopped. I challenge you to join me in planning a citizen's arrest of this culprit.

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CHILDREN – POSTNATAL FEAST OR FAMINE: SOCIETY'S ACHIEVEMENT*

Marvin I. Gottlieb, M.D.

"What is intelligence?" At first glance that appears to be a mundane question, striking the reader as if it were indeed a rhetorical question. A classical response, "the capacity to communicate information," is no longer a satisfying description of intelligence. Paradoxically, as our level of intellectual sophistication becomes more refined, our ability to formulate a working definition of intelligence becomes more difficult. The philosophical meaning of intelligence is mercurial in nature, a precise definition is exceedingly difficult to solidify. Indeed, some confusion persists in the crystallization of an adequate response to the question, "What is intelligence?"

Until recently, this confusion permeated the conceptual thinking about mental retardation or intellectual subnormalcy. It was not until 1961 that the American Association on Mental Deficiency (AAMD) proposed a definition, which was generally accepted by most disciplines. The description relates to "subaverage intellectual functioning which originates during the development period and which is associated with impaired adaptive behavior."

What does this mean? In reconstructing the definition from its component parts, *subaverage intellectual functioning* refers to performance that is greater than one standard deviation below the population mean group involved. The definition further implies that at sometime during the developmental period the brain has been insulted,

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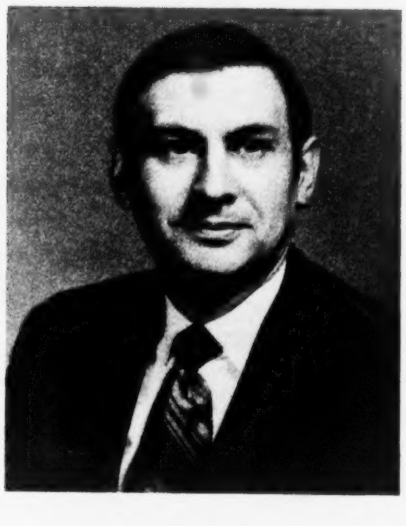
*Editor's Note: This paper was presented as a discussion profusely illustrated with 75 lantern-slides; consequently this text is at best a skeletal narrative.



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embarassed, or injured, which in turn creates an intellectual deficit. Most agree that the developmental period grossly encompasses the span "somewhere between birth and 16 years of age"; this time limit should be broadened. We are cognizant that at the moment of conception (the very instant that the sperm fertilizes the egg), the genetic background can frequently predetermine the future intellectual potential of the individual. For example, focus your attention on the chromosomal situation in Down's syndrome or mongolism; genetically, the fertilization of an egg containing an extra No. 21 chromosome precludes a syndrome associated with at least a 98 percent incidence of mental retardation.

How is mental retardation expressed? The AAMD definition implies that an individual who is intellectually subnormal has *impaired adaptive behavior.* Adaptive behavior can be expressed and measured in three modalities: maturation, learning, and social adjustment. Maturation, sequential development or achievement of the milestones of growth, is frequently delayed in youngsters who are profoundly, severely, or moderately retarded. The time sequence in which a child is able to sit, crawl, walk, verbalize, play with his peers, toilet-train, etc., is often an extremely sensitive barometer of subsequent intellectual maturation. Marked delays in motor achievement may and should arouse suspicions of associated intellectual retardation. The other areas of adaptive behavior, learning and social adjustment, may be the first manifestations of intellectual subnormalcy in individuals who are borderline or mildly retarded and who do not present a lag in their developmental milestones.

The retarded child who escapes detection by his family physician and his parents may have his handicap revealed for the first time in the classroom. The youngster who is unable to effectively compete with his peers in meeting the challenges of a formal educational process demands and deserves intellectual appraisal and investigation. The child who accidentally passes through school by social promotions or who drops out at the legal dropout age and finds that he is unable to cope with the rigors and responsibilities of complex community living also deserves intellectual investigation. This individual, who is unable to adjust socially and ethically to community existence, often is found to have intellectual retardation.

Upon accepting the definition of the AAMD, we assume responsibility for a retarded population that is somewhat overwhelming. By the AAMD criteria approximately 30 million persons in this country would be classified as retarded; a staggering 16 percent of our total population. Many among us are ostrich-like in character, preferring to hide behind the pseudosecurity of old definitions. I recognize that it is somewhat startling and frightening to be made aware of some 30 million handicapped Americans, but the problem cannot be diluted by apathy. However, if you are adamant in hiding behind old definitions, I tell you we are concerning ourselves with approximately six million people, or three percent of our population. This roughly represents the combined populations of Oregon, Wyoming, North Dakota, Mississippi, and Maine. If you need a figure to fix in your mind, think of approximately 126,000 youngsters born each year, who will be classified as retarded. Every five minutes another child is born who will be retarded. This is a figure based on the old definition of intellectual subnormalcy—a frightening number of affected persons regardless of the definition to which one adheres. Of the 130,000 infants born annually, who are retarded or will become mentally retarded, approximately 4,200 or 0.1 percent will be so severely afflicted that they will be unable to care for their own needs in daily living. Approximately 12,600 (0.3 percent) will remain below the mental age of a seven-year-old. The remaining 110,000 (2.6 percent) are those with mild retardation who will require special training and assistance in order to acquire limited job skills and achieve a measure of independence.

Perhaps you are tempted to ask, "Why the fuss over mental retardation? Is this really a problem of sufficient magnitude to warrant our concern and efforts? Is this a disorder comparable to other pressing problems of the day?" In my opinion, the answer to these questions is an unqualified *yes*! Mental retardation in its frequency and ramifications becomes one of the more urgent concerns of the day. When you compare mental retardation to other medical disorders, the problem is even more obvious. In absolute numbers intellectual subnormality involves more persons than blindness, cerebral palsy, polio, and several other crippling diseases all together.

In addition, it is neither fair nor realistic to talk only about the child who is retarded. For example, when we have an individual who has rheumatic heart disease we do not ascribe to him a lifetime of constant supervision. The child with rheumatic heart disease is capable of growing to adulthood, becoming a breadwinner, and functioning effectively as a member of society. However, when we talk of the intellectually handicapped, we involve family constellations. If each child (and this is again using the old definition of mental retardation, three percent) has a mother and father and one sibling, we are creating a situation in which one out of every nine persons in this country will become very intimately associated with the problems of mental retardation. We are talking in terms of a disorder that creates "lifelong parents," whether they be the biological parents, the community, the city, the state, or the federal government. We are talking in terms of chronic supervision for a chronic disorder, a disorder which in many instances will never be compatible with independence.

Let us pause here to define a terminology—a classification—for mental retardation. At present there is no one absolute or completely satisfactory method of evaluating and characterizing the degree of mental retardation. Virtually all classification systems depend heavily on the I.Q. as an index of measurement. It should be stressed that the I.Q. is not the only criterion to be used in evaluating a person's level of retardation; factors such as social adaptability and emotional control are significant factors. Indeed these factors may at times be more significant in the overall evaluation of the patient.

The American Association on Mental Deficiency has recently introduced the following classification involving five categories or levels of retardation that are correlated with levels of I.Q.

Borderline retardation	I.Q. 70-84
Mild retardation	I.Q. 55-69 (50-70)
Moderate retardation	I.Q. 40-54 (35-50)
Severe retardation	I.Q. 25-39 (20-35)
Profound retardation	I.Q. less than 25 (—20)

In preparing an etiological classification of mental retardation, it is obvious that we have much to learn about this problem. In only 25 percent of the cases can we point the finger and say, "This child is retarded because. . . ." In other words, in only one out of four cases is there an organic etiology to explain the retardation. Furthermore, unfortunately, when we have children who are retarded, we are usually dealing with multiple handicaps. These are children who in addition to their intellectual disadvantages have a multitude of physical disorders; each in turn aggravating and augmenting the other. At times the associated problems complicate the intellectual progress that can be made.

Mental retardation is associated with over 200 known medical entities. The following examples will refresh your memories:

Chromosomal or genetic problems. Need I remind you of Down's syndrome, Cry-of-the-Cat syndrome, Klinefelter's syndrome, Trisomy 13-15 syndrome—an entire spectrum of genetic problems involving autosomes and sex chromosomes which are associated with mental retardation?

Infections during the pregnancy. Probably most prominent in your mind is rubella infection during the course of gestation, which has mental retardation as a prominent feature of the array of congenital defects. Others have been incriminated, such as toxoplasmosis and cytomegalic inclusion disease.

Poisons and noxious agents which children are capable of accidentally ingesting.

Traumatic episodes which can disrupt the normal neuronal architecture of the brain and cause mental retardation.

Metabolic disorders, such as galactosemia and PKU, which, if undetected, ravage the nervous system and culminate in severe and profound retardation.

Serious illnesses and dehydration from any cause.

Infections of the nervous system. Anything that interrupts the normal nerve cell patterns of the brain is a potential hazard capable of producing mental retardation.

Admittedly our increasing skills in diagnosis have permitted the linkage of mental retardation with a myriad of medical disorders. However, these associations account for a meager 25 percent of the population of individuals with intellectual subnormality. The overwhelming majority, 75 percent, cannot be assigned a specific etiological basis. It is this latter "undefined" segment that has recently received increasing attention; more will be said of this group later.

I admit that up to this point my dialogue has been rather pessimistic. Has there been any progress, anything that provides some degree of optimism? The answer is yes. We have become much better at identification; our diagnostic acumen has greatly improved. There are three areas for possible identification of the intellectually handicapped child. The child who is profoundly, severely, or even moderately retarded can often be detected quite early in life. These are the youngsters who are extremely slow to speak and slow to understand. These are the children whose retardation is so apparent that it does not usually present a diagnostic challenge for their physicians and parents. However, children who are borderline and mildly retarded are less obvious and may easily escape detection during the preschool years. As these youngsters enter into an academic program and are found wanting in their ability to compete effectively with their peers, they are singled out. Failure to achieve academically signals the need for intellectual investigation. Many of these children, when tested, are found to be borderline and mildly retarded. Because of social inadequacy, the group that escapes detection in the educational process (by social promotion or by dropping out of school) very frequently is tested and is found to be borderline or mildly retarded.

In addition to increased diagnostic skills, there have been several biological breakthroughs in the field of mental retardation. Permit me to remind you of surgical methods developed to prevent the retardation associated with hydrocephalus and craniostenosis, the expanding area of genetic counseling, and the early identification of children with metabolic disturbances. As a result of early identification of such problems as phenylketonuria and the early initiation of dietary treatment, it is possible to prevent the damaging effects of this metabolic disorder. The gamut of our experiences with Rh incompatibility prove a point. The development of kernicterus and subsequent mental retardation as a result of this disorder is well known. In our lifetime we have progressed from understanding the nature of the problem, to neonatal exchange transfusions, to intrauterine exchange transfusions, and, finally, to the development of a vaccine for prevention of the problem. So all is not pessimistic.

It would be natural to assume that because of the magnitude of the problem mental retardation would occupy a priority position of national interest. If we look back into medical and social history, the emphasis unfortunately has been quite meager; the supporters for mental retardation too few. The late President Kennedy was the first national figure to champion the cause of combating mental retardation. For the first time we had a public figure generating interest in a problem too long neglected. Under President Kennedy's direction, the President's Committee on Mental Retardation was formed to evaluate the problem. The first report of this committee was presented in 1967 to President Lyndon Johnson. This document revealed several very frightening statistics. We learned that only two out of ten retarded children in this country will receive the benefits of placement in a special education classroom. Would we tolerate a situation where insulin was available for only two out of every ten children with diabetes? Only three percent of all the mentally retarded in this country will be given opportunities to get into vocational rehabilitation programs. There is little or no opportunity for the mentally retarded to become self-sufficient. We learned pessimistic facts such as there are only 25,000 special educators to work with the handicapped, and the pressing need exists for 75,000 special educators. We learned myriad facts about deficiencies and abuses in residential care for the retarded. In essence, the first report to the President reflected pessimism but opened Pandora's box in exposing the critical needs of the mentally retarded.

The second report of the President's Committee on Mental Retardation was issued the following year. There was a reiteration of all of the needs cited in the 1967 survey with a rehashing of the areas of confusion and the critical shortcomings in available care for our retarded. However, the second report did make probes into the issue of etiological relevancies in mental retardation. The document poignantly demonstrated that the majority of the retarded in this country stem from the poverty and ghetto zones. Only 25 percent of the retarded originate from the middle and higher economic groups; an alarming 75 percent of all the retarded stem from the poverty areas. These are the high-risk zones where prematurity is much more common, where an alarming population of women who deliver in public hospitals never see an obstetrician or physician before delivery, and where infant mortality is out of proportion to the infant mortality observed in the middle income group. The second report of the President's Committee on Mental Retardation stressed that mental retardation, poverty, and deprivation appear to go hand-in-hand. Clinical experiences, as well as animal experimentation, indicate that malnutrition, abuse, neglect, and lack of proper stimulation are in part significant contributing factors in producing *deprivation-retardation.*

Deprivation-retardation represents society's challenge—an opportunity to transform famine into feast. There are two schools of thought about the nature of *culturofamilial deprivation.* There are those who argue that the large number of retardates stemming from the impoverished communities are the product of an accumulation and interaction of defective genes; the victims fail genetically to produce a quality type of protoplasm. On the other side of the fence, we have a group proposing the hypothesis that the high incidence of retardation in the poverty zone is not solely a manifestation of deficient genes; that perhaps deficient diets are more significant or at least equally responsible. In essence we are dealing with two philosophies, one concept arguing the influence of defective genes in producing a defective intellectual nervous system and the other supporting a thesis that an unhealthy environment, negative stimulation, emotional deprivation, and malnutrition can likewise produce a defective nervous system. Supporters of this latter concept cite the fact that experimental animals deprived of adequate nutrition during the gestational period produce offspring with lower birth weights and diminished brain size. These experimental animals are intellectually inferior. We have reason to believe that the same principles apply to humans and recent studies have corroborated animal studies.

Dr. George Tarjan, in the January issue of *Medical Insight,* discussed the issue and noted that we are dealing with three factors: genetic influences, somatic noxae, and early childhood experiences, all of which are important in shaping the eventual intellectual destiny of an individual. All of these factors are in part contributing elements to the syndrome of intellectual deficiency we call deprivation-retardation.

What are the ingredients that comprise this disorder? Let us explore the problem by comparing two children: One from the middle income group and one from a poverty zone. The two children are approximately the same age. Paul comes from a middle income group, he is exposed to all of the psychological stimuli associated with love and affection; his parents are very much interested in his social, emotional, and physical adjustments, in his accomplishments, and his welfare. Paul's personality, sense of values, principles, and perspectives are molded in an environment of healthy, positive, psychological stimuli and nurtured in an atmosphere of concern and stability. John is the product of an impoverished environment where psychological tensions run high. The overwhelming proportion of the social, emotional, psychological, and verbal stimuli he receives is negative; praise is minimal and psychological confusion is the order of the day. John comes from a one parent family; a family constellation which at best is chaotic, harried, and very loosely knit. The psychological input in John's case is basically negative.

Paul is in a setting where his parents place a very high premium on education; they are more than willing to cooperate in nurturing his intellectual and academic drives. John's parent has problems that are far more pressing, overshadowing her interest in her child's intellectual and educational successes. The inhabitants of the poverty area may not be as highly motivated to place strong emphasis on education; their struggle for daily existence by necessity exceeds their interest in reading, writing, and arithmetic. We are conscious of the provisions which are made for Paul in order to encourage learning: books, educational utensils, and privacy. Contrast this educationally conducive environment with John's crowded and chaotic surroundings. In John's world there is no privacy, there is no incentive for studying, there is no encouragement, there is no motivation, there is no room. We find that John is retarded but he is still in a regular classroom rather than receiving special education.

To say the least, emanating from the deprived areas is an atmosphere that reflects a poor educational motivation. This attitude is not confined solely to the children; indeed, the parents mirror this apathy as well.. In the more economically stable communities the PTAs flourish, the turnouts on "open school night" are remarkable, and parent-teacher conferences are numerous. This is not the situation in poverty and ghetto zones. Here the parent has a variety of reasons for explaining her seeming disinterest in John's learning situation. Some parents are frankly not interested; others avoid PTA meetings because they do not have the opportunity, the invitation, or the incentive to attend. We are talking about people who have so many more urgent problems that by necessity education cannot be a priority item.

Shifting our focus, let us compare nutritional standards for the two youngsters. Meals among the middle income group families are frequently oriented in terms of reduction of diets, rather than getting adequate nutrition for survival. Paul's family thinks in terms of: Are we taking in too many calories? Are we including the four basic elements of a proper diet? Compare these nutritional attitudes with the problems experienced by a child from the poverty zone. Genes and protoplasm were literally starved during the course of John's gestational period. His mother's diet was marginal by any standards; it did not contain the four basic food items for proper nutritional adjustment. The uterine environment for John was as lacking in nutrition as is his present dietary regimen. But there are other facets of malnutrition. John often has no breakfast, a scant lunch, and a monotonous and non-nutritional dinner. Dinner not uncommonly consists of one vegetable and white bread, at times without a beverage. Paul goes to school and his teacher talks about algebra and hopefully Paul thinks algebra. John goes to school and his teacher talks algebra and John probably thinks about food. Poverty is most unfair to children and this is one of the penalties John pays for being born into a poverty family. Empty stomachs produce empty minds.

Comparisons of Paul's and John's physical environments really need no elaborate clarification. The physical environment of the average middle income group is relatively safe and free of hazards. In the impoverished areas, there is very little care, very little pride, very little interest in the immediate physical surroundings. Many of these areas become littered, roach and rat infested havens for accidents and health hazards. To compound the problem, children in these poverty zones are left to shift for themselves with very little supervision or direction.

Let us similarly face up to a problem of neglected basic dental and medical care. In better income groups the philosophy is one of preventive medicine, parents think in terms of annual checkups, in terms of "look, Mom, no cavities." This is not the situation in the poverty zones. In the impoverished areas there are long clinic lines, hours of waiting in an emergency room to be seen by a physician or dentist. We think in terms of the physical inconveniences which discourage preventive health measures. Who is to watch the other four or five children at home when one is to be seen in the clinic? These are individuals who seek care only after the damage has been done. In most instances only major problems prompt an individual to seek assistance in a clinic; at times the problem is beyond repair.

At one time it was not uncommon to cause a geriatric patient utter despair as a result of conscientious care. For example, if the elderly patient happened to be a male with prostate trouble, diabetes, glaucoma, hypertension and an assortment of other medical problems, he was assigned to four or five different clinics which met on four or five different days, with little consideration of how he got there or how long he waited to be seen. Not uncommonly, he spent several hours in each clinic waiting his turn. He spent his geriatric lifetime waiting in clinics to have his medical entities checked. These are the medical and dental problems which face people coming from the poverty zones. By all standards Paul and John experience different levels of basic medical and dental care.

We talk in terms of very simple things in daily living; for example, the stimuli of privacy, the simple, everyday, taken-for-granted watching of television programs. Recently on a home visit to see John, it was observed that he and his siblings were watching television. It was quite conspicuous—they have three TV sets! Set one has no picture, it has no sound, it serves as a table; set two has a picture but no sound; set three has sound but no picture. With the three sets they get one program. But more important than that, several accident-prone situations were observed in the home. One child was sitting on the electric wire leading to the TV set. John was leaning on the electric cord going to an iron which was right above his head. Paul has one television set in his room and it is in excellent working condition.

Paul gets away during the summer months to a camp where he can meet new people and experience new stimuli to broaden his intellectual armarium. People in the poverty zone are destined to 365 days a year of the same repetitious and monotonous environment. Only a few lucky kids get a two-week experience in a summer camp by virtue of charities' chance. John was not lucky.

We talk in terms of family love, family constellations where Paul and his parents practice the principle of togetherness. We find family love and togetherness empty of meaning in a deprivation situation, in a poverty setting. Here, family life may have a completely different perspective.

The importance of these multiple factors in developing the intellectual abilities of an individual cannot be overestimated. The child from a poverty area, whose world of animals consists of cats and rats; whose world of books may be limited to the Bible and the telephone book; whose world of recreation is a shower from a fire hydrant; whose world of experiences provides frequent exposure to alcoholics, drug addicts, and violence as well as other innumerable forms of misery, is the sum of these life experiences which produce an individual with an impaired intellectual ability. Perhaps a retarded child is even more vulnerable to these adverse factors in his environment, which in turn may prevent him from reaching maximum potential.

At the present time it is impossible to assign clear weights to each of these general causative environmental factors. Perhaps these negative influences work hand in hand and in various combinations, one augmenting the other. More often than not, multiple factors interact within a single individual.

At this point you may ask "where are they?" The victims of deprivation-retardation don't wear signs reading, "I come from a poverty zone; I am borderline or mildly retarded." They begin to assimilate in their community. They do not present gross physical stigmata. These individuals when placed in an environment which is not intellectually challenging cannot be differentiated from their peers. However, when they are placed in situations where thought, reason, and decision become prominent factors, they often fall apart and are identified because of their intellectual weaknesses. Consequently, individuals in the poverty zone who manifest deprivation-retardation end up getting menial jobs or worse. These are the individuals who become the source, the nucleus of a large group of children who become juvenile delinquents, of those who are chronic offenders; and these are individuals by reason of their retardation who cannot make decisions as to what is right and what is wrong.

If we took one individual from this stifling environment and put him under the analytic microscope, we would find he comes from an area of crowded housing, bad friends, poor family relationships, and deficient nutrition. He becomes a characteristic picture of borderline and mild retardation. He does not have gross physical characteristics which set him apart from other members of his community. His identification is based upon his inability to function intellectually. He is the child who matures a little later than his peers, developing in a normal pattern but at a slower pace. He walks a bit later, talks a bit later, toilet-trains a bit later. As a group these are the children who are a little bit smaller, a little bit clumsier, and a lot unhealthier than their peers from the middle and higher income groups. These are the children who fall apart rapidly in an educational setting, who perform marginally or minimally, usually dropping out at the legal dropout age, or sitting and learning nothing as they are socially promoted term after term. In summary, these are the children who have suffered intellectual starvation as a result of cultural and familial deprivation and end up with deprivation-retardation as their label.

It would be unfair of me to simply drop a problem into your lap and offer no comment about possible solutions. Society has a dilemma to perpetuate famine or to promote feast. I am not really sure that I can give you any solutions. Questions are easier to formulate. However, we know that this is a problem that we must stop whispering about. For centuries we whispered about mental retardation and we never made any inroads into the problem. Some people feel that this is a religious responsibility and should be tackled from the angle of "being my brother's keeper." Others feel that this is purely an economic problem that can be solved simply by handing out money. I really don't believe so. The answer does not simply end by supplying social workers, Head Start projects, hot lunches in school, jobs, free medical care, and/or better housing. I think what we are talking about is a multifaceted problem. Rather than one solution, perhaps many are needed—perhaps even the entire reorganization of our society's thinking. Having accepted a premise that mental retardation is not a static phenomenon, a similar attitude must be assumed in bringing about a solution through a dynamic series of events.

MENTAL SUBNORMALITY:
A Reproductive Challenge

Arthur T. Fort, M.D.

If *prenatal famine,* so clearly manifested in fetal growth retardation, is the principal culprit in producing mental subnormality, how does it carry out this theft of intellectual potential? The explanation seems to rest with the development sequence of the human brain. The brain, unlike most other body tissues, gets most of its proliferation accomplished prior to birth. The neurons themselves have completed their cell division by 7½ months gestation, nearly six weeks before birth (1). Never again can they resume this process nor go back for second helpings. The supporting tissues of the brain also reach their maximum rate of proliferation six weeks prior to term (2), although in contrast to the neurons they continue proliferation into childhood and are better able to compensate postnatally for prenatal famine.

If we now leave the how and shift to when this prenatal famine transacts its crime, we will discover that it is most often associated with four reproductive characteristics enumerated in the earlier paper. These are (1) beginning reproduction too early in life, (2) reproducing too soon after previous birth, (3) reproducing too many times, and (4) a life style excluding adequate prenatal medical care and nutrition. In addition, certain pregnancy complications may lead to an inadequate or hostile intrauterine environment. That is a medical problem and will be discussed later. How does each of these characteristics contribute to prenatal famine and what attempts need to be made to prevent its ill effects?

Beginning Reproduction Too Early in Life. The teenage mother has the highest rate of prematurity of any age group. The teenage mother is more apt to lose her own life during pregnancy than any other age group. The teenage mother is very likely to have an illegitimate pregnancy, bringing into the world a child with little chance of wholesome and consistent nurture. Even if married, her divorce rate approaches 50 percent. From almost any aspect the teenager is a poor reproductive performer. Whether viewed from medical, social, or educational prospects, the pregnant teenager is a high-risk individual (3).

Is this poor performance inherent in her age and likely to affect all teenagers or is it mostly a product of her life style? To some extent both factors are at work, but life style is clearly the most important. This is evident from the wide difference between reproductive performances of economically disadvantaged teenagers when compared to those well cared for. If, for example, black teenagers as a group are compared to white, the prematurity rate is often four or five times higher among the black for the simple reason that a higher proportion of the blacks are economically disadvantaged. If prematurity rates among middle-class girls well cared for in homes for the unwed are compared to rates among teenage public clinic patients, the comparison shows that clinic patients have a rate four or five times higher.

Many factors contribute to these differences, but probably the most important one is maternal nutrition. Disadvantaged teenagers often lack both the knowledge of and means to acquire adequate nutrition. When they are singled out for tender loving care in special clinics and provided means and knowledge of proper nutrition, the prematurity rate drops drastically to a level near the more mature middle-class mother (4). She is still a teenager, however, and not usually a good candidate for motherhood. She is usually unable to provide the nurture a growing child needs to develop to his fullest. Although special clinics decrease prenatal famine for the teenager's offspring, they do not care for her child. She and the child would be much better off delaying reproduction until her education was completed and a stable marriage was extant. She needs to practice "genosave," which means save your genes for expresssion at the right time, a time most advantageous for them, a time when they have a decent chance of being a credit to mother and father and whatever racial group they represent.

In farming terms, if a farmer broadcasts his seed helter-skelter anytime he happens to feel like it without regard to whether or not the land has been prepared, the weeds cleared, or the season right, some may germinate; but the tender little sprouts may emerge among weeds that choke out sunlight and moisture, or they may emerge just before a freeze or during a drouth of late summer, and develop into stunted plants. If the farmer held his seeds until the land was prepared and the season was right, when he did broadcast them, they would emerge in the warmth of spring, provided with abundant sunlight and moisture, and most would flourish into healthy plants. The same principle applies to humans. Somehow we must inculcate into our teenagers some sense regarding reproduction and assist them in preventing it. We must restructure the present sex education programs that seem to be ineffective and come up with some sort of curriculum with an inoffensive title that prepares teenagers for true life. It should cover sex, dating, reproduction, contraception, nutrition, and wise consumer practices without disguising them. We need to know these things more than how to conjugate verbs or who signed the Louisiana Purchase.

If anyone doubts that present sex education programs are ineffective, look at the epidemic of unwed motherhood in our country—89,500 in 1940 and 291,200 in 1965—and the number has continued to increase despite the fact that the overall birthrate in this country is falling (5). In 1965, forty percent of those unwed mothers were teenagers and the proportion has increased (6). An out-of-wedlock pregnancy often locks a teenager in a cycle from which she cannot escape; repeat pregnancies, dropping out of school, welfare subsistence, and failure to become a productive individual (7). Waters (8) identified a syndrome of failure characteristic of many pregnant young adolescents: failure to remain in school, failure to limit family size, failure to establish stable family relationships, failure to become self-supporting, and failure to have healthy infants.

Unmarried teenage mothers do not fit a stereotype of promiscuity, mental retardation, or ignorance (9). Kinch compared a group of teenage mothers who were married to a matched unmarried group. There were no distinctive differences. Most had basic understanding of sex and the need for contraceptives, yet 75 percent didn't use contraceptives. The married were much more inclined to use them than the unmarried. The usual reason for intercourse was because they thought themselves to be "in love" or they thought the boy would leave them if they denied him sexual privileges. In an analysis of unwed teenage mothers in four maternity homes in Los Angeles, Von Der Ahe (10) found that initial intercourse had occurred in either the boy's or girl's home in 57.6 percent of the cases and that the intercourse usually occurred within the context of parentally approved dating practices, especially where "going steady" was allowed to create deep involvements of young people obviously unable to handle them. The majority were not engaging in intercourse because of strong physical drives but rather because of psychological needs to gain love, acceptance, and attention.

It seems evident to me that the parents were not alert to the actions or attentive to the needs of their teenage daughters. One wonders if the need for acceptance, love, and affection these youngsters were manifesting might not have been met in a nonsexual context by a loving father. It does appear that the girl inclined to premarital intercourse has less self-esteem, so that she is apt to think she must gain acceptance and attention by giving sexually. We know much less about the motivation of the underprivileged pregnant teenager not found in a maternity home and not available for study, especially the black one. She is the highest risk of all. Special attempts must be made to reach her. It has been suggested that one answer is to make contraceptives and sex counseling readily available without question to teenagers, especially those in the innercity where less than one-half of the teenage mothers ever come to clinic during the final part of pregnancy, much less come throughout the gestational period when medical care is badly needed. Such a program was tested in Baltimore (11) offering a broad spectrum of health services by an interdisciplinary team. Birth control services with intensive individual and group counseling were provided for preventing unplanned pregnancies in sexually active nulliparous adolescents. After two years, less than one-half remained on contraceptives, although a larger number continued to use the counseling. No clear victory emerged for those either for or against such a clinic.

The problem is so complex that the answer must be equally as complex. I have even heard it suggested that contraceptives be dissolved in the water supply. That solution is unacceptable since the water also serves our animals, our fish, and many of our plants—all needed for food supply.

The best answer does not seem to lie in better clinics for prenatal care, but in early education, the time when you in education have access to these youngsters. Therefore I challenge you to tackle the problems of teenage pregnancy. You get the fruits of these pregnancies. We in medicine can't do much once conception has occurred. You must teach them: "Genosave, baby, not genocide!"

Reproducing Too Soon After Previous Birth. It takes the maternal incubator a certain amount of time to renovate and prepare for the next pregnancy. Animals have certain intervals that tend to be maintained by nursing the offspring. Nursing usually prevents ovulation and conception. The human mother has almost given up nursing and is apt to conceive each year if not deterred. If one looks at birth weight as an index of wholesome incubation, it is obvious that it declines when births are spaced at less than two year intervals.

Reproducing Too Many Times. Physical, economic, and psychological resources for the nurture of children must be proportioned to each child born. There is a point where the resources are exceeded. This is evident in the poverty-fertility cycle seen in the innercity ghetto; this is evident among nations such as those in South America. There is also a point where the maternal incubator seems to wear out. When a woman has more than four pregnancies, birth weight generally begins to decline, the perinatal mortality goes up, pregnancy complications are more likely, and the risk of maternal death increases sharply. In this case, reproduction too soon after previous birth and too many times is often more a result of contraceptive failure than disregard for contraception so characteristic of teenage motherhood, although the woman whose contraceptive fails initially is also more likely to experience contraceptive failure later.

Bumpass and Westoff (12) made a survey of unwanted births among 5,600 American couples chosen as a national representative sample. Overall one-fifth of all births and one-third of black births from 1960-1965 were unwanted. As would be expected, the percentage increases rapidly with birth order: 5 percent of first births, 30 percent of fourth births, and 50 percent of sixth or higher order births were unwanted. For blacks the corresponding figures were 12 percent, 44 percent, and 66 percent. These figures are based on a retrospective question and are probably understated since it is hard to say a child is unwanted once it has been born. The problem of helping prevent unplanned and unwanted births is more of a medical problem than a social problem. We are trying to develop better contraceptives; contraceptives that are safer, contraceptives that are more reliable, contraceptives with no side effects. However, the contraceptives we have would be very successful if used. Getting people interested in using them is an educational problem that you and I must tackle together.

Life Style. Inadequate prenatal nutrition and failure to obtain medical attention are a part of a large social problem in this country. This problem has two facets: one is making care available, the other is motivating people to use the care that we already have available. This is especially true among those in the "culture of poverty," who seem out of our reach. To quote Whitney Young,

> The world of the culture of poverty is a world that rejects our targets of success, our social status, our ethics, and our social values not for intellectual reasons, but out of despair. Nevertheless, it is a world with its own rules, taboos, pride, and scale of values. It is a world we have to learn to understand with intelligence and compassion, with which we have to learn to communicate, and which we must convince, despite its skepticism and its suspicion, that our goals are worthwhile. We have to prevent its spread, because it breaks the human spirit and so becomes the breeding ground of retardation (13).

We also need to develop special clinics to provide adequate nutrition for all pregnant mothers as an investment in our nation's future brain power. Such clinics are emerging throughout the country. These clinics should concentrate on high-risk mothers who make such a disproportionate contribution to the great brain robbery inherent in unplanned parenthood.

Finally, some mental retardation has nothing to do with these reproductive characteristics. It results from medical complications of pregnancy, congenital defects, maternal infections, etc. To handle these problems, a whole new field of prenatal medicine is evolving. The unborn child can be treated or diagnosed by inserting a needle into the pregnant uterus transabdominally. Although exciting, this new area is beyond the scope of this program.

In summary, let's work together to prevent the bulk of mental retardation by teaching and helping our young to become pregnant at the right time. Let's teach "geno-save, baby, not genocide." Let's stop unplanned parenthood—the great brain robber.

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LEARNING DISABILITIES: Everyone's Problem

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Any youngster would readily give testimony that the process of learning is complex, consuming, and fraught with myriad challenging hazards. Many of the obstacles encountered along the educational journey are avoidable or remediable. The penalty to be paid for delayed diagnosis and therapy is often a youngster with irreversible educational, social, and emotional difficulties. The child with a learning disability runs the risk of becoming a noncontributing member of his community or "functionally retarded." Equally important is the youngster who does not utilize and express his full potential. Society can ill-afford the consequences of a squandered intellect. These are the children who become everyone's problem!

I would like to share with you a pediatrician's overview of "why a child cannot learn"; a medically slanted concept of the youngster in educational jeopardy. The spectrum of etiological factors is expansive and time does not permit a detailed analysis of all. Allow me to present a sketchy panoramic view but to develop one particular subject in greater detail. For this latter purpose, I have selected "minimal brain dysfunction," probably the most outstanding of educational cripplers.

Why A Child Cannot Learn

Mental Retardation

Not infrequently, very early in an academic setting, a youngster is found to be ineffectively competing with his peers. Psychological evaluation may indicate that the child is of borderline or mild levels of mental retardation. This is the child who escapes detection by parents and physicians but is singled out because of academic insufficiency. This child will require special education in order to learn.

If we accept the American Association on Mental Deficiency definition of mental retardation, we are dealing with approximately sixteen percent of our population—over 30 million in this country who will be classified as intellectually subnormal. The majority of these individuals falls into the categories of borderline and mild retardation. They present a therapeutic challenge to educators and a social and vocational challenge for their community. The youngsters in this category are more often than not first detected in an educational setting.

Malnutrition

Perhaps closely associated with mental retardation, almost as a cause-and-effect phenomenon, is the problem of malnutrition. We are in the embryonic stage in the comprehension of the sequelae of inadequate nutrition upon the integrity of the nervous system. There are many questions unanswered. What is the effect of faulty feeding of the pregnant uterus; does this imply a famished fetus? Does early malnutrition significantly alter intellectual potential? Are there critical periods, critical thresholds, susceptible individuals? The studies on experimental animals and of human populations are suggestive of a direct relationship between "starved" bodies and "starved" intellects.

As a side-effect, possibly contributing more to the problem of deficient learning than does fetal or infant malnutrition, is the situation in which a youngster goes off to school poorly fed. An empty stomach is not a stimulus or an incentive to learn. The partially fed child thinks food while the teacher talks history or arithmetic. These are the youngsters who rarely have a decent or filling breakfast, and often an equally nonsatisfying lunch. Their immediate educational progress is hampered by an immediate nutritional neglect.

A corollary of poor nutrition is iron-deficiency anemia, at times a seemingly endemic disorder of epidemic proportions. Does this lack of circulating hemoglobin take its toll on a youngster's ability to concentrate, absorb, and enjoy an educational program? I believe school performance must pay the penalty for physiological imbalances.

Organic Handicaps

The youngster who is hurriedly ushered through an annual physical examination may pay the consequences for medical neglect by substandard academic achievements. The child who is not detected as having a partial hearing loss, a defect in visual acuity, numerous carious or abscessed teeth, or motor incoordination, among a host of organic disorders, may reflect these organic impairments by an inability to fulfill intellectual potential. The child with poor vision and deficient hearing should be in the front of a classroom. The diagnosis of a medical disorder is not the responsibility of a teacher or a volunteer tester. It is the responsibility of a physician to determine the physical fitness of the educational candidate.

Emotional Disorders

The child with an emotional disturbance is as vulnerable as the youngster with an organic handicap. This is the student whose body occupies a classroom seat, but whose mind may be a million miles away. Time does not permit an extensive analysis of the emotionally based disorders that interfere with the learning process. School aversions and school phobias represent obvious forms of disorders that require therapy in order to effect a comfortable and meaningful learning situation. There are many more subtle forms of personality, behavioral, and emotional problems that preclude academic underachievement. Chronic anxiety, poor self-esteem, emotional immaturity, and fears of rejection (although less dramatic than autism and childhood schizophrenia) share a common denominator in that they may all interfere with the normal process of learning.

Motivation

The Child. Lack of motivation, lack of desire, lack of interest in an educational setting is not an endogenous phenomenon but can be precipitated by a variety of exogenous factors. The focus is not on the youngster who on a clear spring day trades in his teacher for a fishing pole or a swimming hole, but on the so-called "chronic hookey player," the child who may be attending school, who has the facility and capacity for learning, but whose motivation has not been cultivated.

Several factors have been cited which could effect a poor motivational attitude; anemia, poor vision, hunger—to mention but a few. There are other more subtle influences that must be considered, ranging from parasites to overcrowded classrooms. There are a host of subtle, but nevertheless meaningful, enthusiasm squelchers. At times a careful scrutiny, a detailed investigation, a minute dissection is required to expose the factors causing this negative educational attitude. The following are some of the more interesting items formulating a panoramic spectrum of causations of motivation-deprivation:

> "The older boys make me pay money so they will not beat me up, so I don't want to go to school."
> "There aren't enough books and I can only get to use the science book on Thursdays."
> "There is too much noise in the class so you can't hear the teacher."
> "I'm ashamed of my clothes, my folks are poor, so I don't want the others to see me."
> "If I get one good grade my folks will make me work hard to get good grades in everything."
> "My folks make me go to this private school but all my friends are at regular school; I wish I were with my real friends."
> "I like English but because I'm no good in arithmetic I have to stay and be tutored in arithmetic; school is no fun."
> "I have headaches in school and feel like I want to go to sleep."
> "I hate school because the teachers say I'm dumb and the other kids make fun of me. Maybe I really am dumb so I don't even study for tests."

These are a few examples of the exogenous factors influencing motivation; factors which have social, emotional, financial, medical, environmental, and imaginary bases.

The Parent. The uninspired student is not always the product of his own making. At times parents are the culprits. There are two types of parents that comprise this category: the education "bears" and the education apathetics.

The education "bears" are the parents who too frequently demand more of their child than their youngster could ever hope to produce. These parents who concentrate their waking hours into making their child "a better student, a straight *A* student, the best in the class" often create a boomerang effect. The pressures of striving to achieve for "Mom and Dad" may suppress natural abilities; the *B* student may bring home *C's* and *D's*, whereas the average student may academically collapse under the pressure. Parents who have an image of themselves as their child's teacher and tutor may find that their offspring has developed appropriate attitudes to maintain the role. The "Mom and Dad" may soon become synonymous with "teacher and principal"; with transposed feelings of affection and love. Children thus pressured may interpret educational difficulties with parental rejection.

The education apathetics are the parents who have little or no interest in their child's academic achievement, or lack of achievement. The parent who places on the teacher and the school the sole responsibility for a child's academic performance often does so because of a lack of interest and concern. There are innumerable reasons why this apathy exists: parents who themselves represent levels of borderline retardation, or who have had educational difficulties, or who have no interest in "getting involved" frequently will reflect a negativistic attitude. Parents from poverty areas not infrequently, by necessity, place education low on their priority lists—the daily struggle for survival may overshadow their interests in a youngster's educational prowess. In large families with multiple problems and deprivation education is not the most pressing challenge.

A genuine, healthy, and concerned attitude on the part of parents is to be desired. Interest in the child, his teacher, and his educational environment is to be lauded; unfounded expectations and pressures to excel are to be frowned upon.

The Teacher. Teachers and schools make up the bulk of a youngster's life and world for approximately twelve years. What is molded during that period forms the basis of an individual's total life span. Teachers charged with this responsibility are not provided with adequately regulated class sizes, adequate assistants, adequate teaching tools, nor adequate financial remunerations. It is paradoxical that teachers are expected to be responsible for educating children, building into our youngsters a strong sense of values, and developing sound minds and bodies while they are financially denied. The overworked, underpaid, and poorly equipped teacher may reflect a displeasure that directly affects the developing attitudes of many young but perceptive minds. Teacher induced anxieties and motivational depression are often directly correlated with apathetic parents and apathetic school officials.

Teachers who are not well versed in modern audio-visual techniques may be denying their students a better method of academic delivery. Teachers who are ritualistic, bored, uninspired, tired, or tense can dampen the enthusiasm of an eager mind. The direct result of a teacher who is not tuned-in is a student who is tuned-out.

An associated weakness of our system is the dramatic shortage of qualified teachers, particularly in special education. A job cannot be performed, the product cannot be delivered if the philosophy but not the manpower exists to perform the job. Teaching children with exceptional problems is an exceptional challenge; without the necessary force of skilled educators we create an exceptional dilemma.

Specific Learning Disabilities

In the educational field we have expanded our interests from the three R's (reading, 'riting, and 'rithmetic) to include the three D's (dyslexia, dysgraphia, and dyscalculia). Educators are now concerned with the reasons why a youngster cannot read (dyslexia), do arithmetic (dyscalculia), or write (dysgraphia). The limits of the definition of these various entities are somewhat nebulous. As an entity each has been over- and under-diagnosed. No common terminology exists for all disciplines; an etiological confusion further complicates the issue. Various specific therapeutic measures are in great abundance, attesting to the need for further clarification of these entities as factors inhibiting the learning process.

Minimal Brain Dysfunction in Children

The mercurial nature of the minimal brain dysfunction syndrome (MBD) challenges the diagnostic acumen of the most astute clinician. The broad and indefinite spectrum of associated signs and symptoms imparts a clinical and educational vagueness. The uncertain etiological influences, the suspicious (but nondiagnostic) lag in developmental milestones, the equivocal findings on general and neurologic examinations, and the nonpathognomonic laboratory data frequently delay diagnosis and/or culminate in a misdiagnosis. It is not unusual for both physician and parents to look upon the inappropriate behavior of a preschool child as a transient and relatively bewildering but unimportant problem that he will eventually outgrow.

It is not until the child is confronted with the challenge of a formal learning experience that the problem of MBD seems to crystallize into a recognizable entity. The child suspected of having MBD is viewed in a new perspective: he has apparently normal intelligence and good physical being, but manifests difficulty in learning and a behavior problem both in school and at home. Not uncommonly, after expressions of concern by the teacher the child is examined by a physician; the parents seeking a diagnostic and a suggested program of therapy.

General Concepts

Minimal brain dysfunction syndrome gradually evolved its status as an entity over a period of several decades. The pertinent literature of the early 1920s reflected a sparse fund of information about the disorder as we recognize it today; a few reports correlated "nervous conditions" in children and associated problems in behavior and learning. It was not until the early 1930s that publications appeared which established the foundation for the concept and understanding of MBD.

Throughout the years numerous investigators recognized and linked brain insults of various types with resultant behavioral abnormalities and learning disabilities. Among the etiological factors incriminated were head trauma, encephalitis and meningitis, pertussis, and, as a late effect, lead poisoning. It had also been hypothesized that there was an association between maternal and fetal factors and the subsequent development of reading disabilities. The concept seemingly was supported by observations that children with reading disabilities more frequently had a history of prematurity, toxemias, and/or bleeding during pregnancy.

Brain-injured children with an "intact" intellect, but specific learning disabilities, must be differentiated from those who are mentally retarded; both groups require special, but different, education programs. In the early 1940s, it was suggested that there was an association between perceptual difficulties and MBD.

Terminology

Concomitant with the growing interest in children with behavioral and learning disabilities was an expansion of the list of descriptive titles, all basically denoting MBD. By 1966, there were approximately 38 different titles describing the syndrome of MBD—organic brain damage, organic drivenness, minimal cerebral palsy, hyperkinetic behavior syndrome, psychoneurological learning disorder, clumsy child syndrome, perceptual cripple—permeating the literature. The descriptive phrases "minor brain damage" and "minimal brain injury" were utilized in 1947, suggesting that minimal brain injuries could affect behavior and learning without significantly lowering the intellect.

In keeping with the concepts of the National Institute of Neurological Diseases and Blindness, the Division of Chronic Diseases of the U.S. Public Health Service, and the National Society for Crippled Children and Adults, the definition of MBD is as follows:

> Minimal Brain Dysfunction Syndrome refers to children of near average, average, or above average general intelligence with learning and/or behavioral abnormalities that range from mild to severe, which are associated with deviations of function of the central nervous system. These deviations manifest themselves in varying combinations of impairment in perception, conceptualization, language, memory, and control of attention, impulse, or motor function. These disturbances may result from a wide spectrum of injuries and insults both unknown and known such as genetic variations, biochemical disturbances, perinatal birth injuries, infections, or traumatic insults which are sustained during the critical formative period of the central nervous system.

Incidence

Accurate figures of the numbers of children with minimal brain dysfunction syndrome are not available. Conservative estimates appear to be in the order of five to ten percent of the random pediatric population. Even if the more conservative estimate is used as a baseline, we are challenged by a problem of tremendous magnitude. It is readily apparent that MBD is more prevalent than the combined populations of mental retardation of mild or greater degree (three percent), cerebral palsy (0.5 percent), and epilepsy (0.5 percent). This disorder takes the position of being the most common neurologic problem encountered in a pediatric population involving approximately two to four million children.

Reliable statistics are difficult to compile for several reasons: (1) there is difficulty defining the syndrome, (2) there is difficulty with recognition, and (3) the syndrome is not a reportable disorder. However, it is an unquestioned observation that more than four million children, with average or better than average intellect, do not read at their expected level. The problem is international in scope, with very similar incidences reported in other parts of the world.

Unfortunately there has been an increased frequency of over-diagnosis of MBD; the label is being stamped on a large number of children based on diagnostic criteria. In many instances the diagnosis of MBD has become a wastebasket excuse for any child who is hyperactive or who performs poorly in school, but does not appear overtly retarded or obviously emotionally disturbed. Indeed, the diagnosis may be a fashionable method of explaining a child's inadequacies.

Regardless of which end of the statistical range one chooses to accept as a true reflection of the incidence of minimal brain dysfunction, the problem is of sufficient magnitude to warrant intensive concern. In essence we are dealing with a very sizeable proportion of our pediatric population; indeed, a shockingly large number of children who will encounter marked difficulty during their preschool and school years.

Etiology

A division of thought prevails in defining the causative factors of minimal brain dysfunction; exponents of "an organic injury" take issue with those supporting "emotional stresses" as the basis of origin. Arguments in favor of a nonorganic etiology are reinforced by observations that (1) hyperkinesis is frequently found in patients with or without abnormalities on the electroencephalogram, (2) pathological specimens do not reveal foci of brain lesions, and (3) brain damage is not always associated with hyperactivity, perceptual handicaps, or emotional disturbances. Proponents of emotional causation argue that simply because the manifestations of MBD appear to mimic signs and symptoms of well-authenticated cases of organic brain injury, preexisting central nervous system damage cannot be assumed. At our present level of sophistication we are unable to quantitatively correlate organic brain damage and behavioral abnormalities. Furthermore, there are hazards in making definitive deductions from postmortem specimens; especially in children. In essence there is a school of thought that suggests that the behavioral constellation observed in MBD is the consequence of emotional factors, caused solely by environmental stresses.

On the other hand, it appears undeniable that there is a relatively high incidence of prenatal and perinatal complications associated with hyperkinetic children. In general, retrospective studies of children with MBD have shown an increased frequency of prenatal, neonatal, and postnatal difficulties. Whether or not the underlying problem is one of an organic lesion or of a maturational lag (the "late bloomers"), with the minor neurologic signs reflecting cerebral immaturity, has not been fully resolved.

Although the etiology of minimal brain dysfunction syndrome is somewhat obscure, the tendency is to lean in the direction of an organically determined type of insult.

Clinical Characteristics

The child with minimal brain dysfunction syndrome is often difficult to clinically categorize. This is the youngster recognized as having apparently a normal intellect, not obviously emotionally disturbed, with no gross impairments of auditory or visual acuity, and no major coordination disturbances, who has difficulty learning in the regular school environment and is additionally handicapped by a be-

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havioral problem. There are no pathognomonic clinical signs associated with MBD; many of the features are observed, not infrequently, in normal children. The clinical characteristics that are associated with the disorder are not uniformly nor universally encountered in every child with MBD; more often than not, only a few symptoms are present and the combination of symptoms varies from child to child.

Ten characteristics of MBD most often cited in the literature are (1) hyperactivity, (2) perceptual-motor impairments, (3) emotional lability, (4) general coordination deficits, (5) disorders of attention (short attention span, distractibility, perseveration), (6) impulsivity, (7) disorders of memory and thinking, (8) specific learning disabilities (reading, arithmetic, writing, spelling), (9) disorders of speech and hearing, and (10) equivocal neurological signs and electroencephalographic irregularities.

1. *Hyperactivity.* This is a characteristic of special interest in that it is the most frequently encountered sign and probably the most troublesome. The child can be envisioned as being in a state of perpetual motion; restless, frigid, flitting from one activity to another and accomplishing little more than being extremely annoying to his peers and elders. Excess or "supercharged" activity is usually exhibited both at home and in the schoolroom; in the latter the youngster is a most distracting influence. These children, as infants, are restless and may be poor sleepers; as toddlers, they seldom persist in any activity for any length of time. In youngsters, the hyperkinesis may be evidenced as clown-like, silly, or immature behavior. Occasionally, hyperactivity assumes the form of incessant and uninhibited speech.

Less often, a child with MBD has inappropriate behavior manifested by hypoactivity. The child may be excessively shy, listless, withdrawn, and negativistic; activity is the exception, not the rule.

2. *Perceptual-Motor Impairments.* Children with brain injury may have marked impairment of visual and/or auditory perception. Less frequently, perceptual deficits may also take the form of kinesthetic and tactile deficits. The pattern of these deficits varies markedly from one child to another and no single perceptual test indicator is reliably related purely to brain dysfunction. The child with MBD demonstrates poor printing, drawings, and penmanship, and exhibits poor and unpredictable skills in reproducing geometric designs (as in the Bender Visual Motor Gestalt test). In essence, the deviations shown by children with minimal brain dysfunction on the Bender-Gestalt are similar to productions of very much younger normal children. Among the observed aberrations are rotated drawings, difficulty with acute angles, gross distortions of gestalten, crude copies of geometric figures such

as circles, and perseverations. Difficulty with geometric design is not limited to pencil and paper reproductions but is evidenced in block design as well. In classroom performances, the teacher may recognize perceptual difficulties as distortions and confusion with form discrimination, form constancy, and rotation of forms in space.

3. *Emotional Lability.* Socially, the child with MBD has serious adaptive problems because of his marked emotional lability. Often referred to as oversensitive, high-strung, and temperamental, he is quick to anger over the most minor situation. Quick and broad mood swings are not uncommon. Frequently, adults categorize the youngster as "the brat" or "the spoiled child." Children are less tolerant, much more frank and outspoken, and often cruel; frequently they label him as the "queer" or the "oddball." More often than not, the child with MBD finds it difficult to obey the rules of the game, and he is rapidly ostracized by his peer group.

4. *General Coordination Deficits.* The child with MBD often gives the appearance of being awkward and clumsy either in overall coordination or in fine motor performance. Typically, motor coordination is disturbed; however the degree may be such that it is overlooked or ignored on neurological examination. The awkwardness and clumsiness is of the type that is usually equated with immaturity and growing up, rather than with a neurological motor-based incoordination. The child may exhibit difficulty with balancing, jumping, and running; this may place a strain on social peer interrelations. Awkwardness with food utensils, clumsiness in dressing and inability to button garments is noted at home; clumsiness with pen, pencil, and chalk may be evidenced in the classroom.

5. *Disorders of Attention.* Disturbances of attention may assume a variety of forms: short attention span, distractability, and perseveration. The child with MBD appears to lack the ability to sort out important stimuli from those which are relatively insignificant, distributing his attention to almost all stimuli in his environment, including those which would normally be ignored. Consequently he does not appear to be able to concentrate on any one activity for any length of time. He is seemingly bombarded with extraneous and irrelevant stimuli to which he pays undue attention at the expense of the more important messages. Some of the children become "fixed" in repetitious activity—perseverative behavior. There is no consistent pattern to the span of attention; occasionally, with aroused interest, the attention span may become relatively prolonged. Distractability is proportionately altered. An aberrant form of altered attention span occasionally observed is the day-dreamer with an abnormally prolonged attention span.

6. ***Impulsivity.*** The child with MBD is constantly confronted and challenged by the rigors of regulations imposed by family, teachers, peer groups, and society. Impulsivity creates conflicts; when the youngster cannot keep from touching things, his speech is uninhibited and unchecked, his behavior antisocial, he becomes intolerable. As a result of impulsivity, the child with MBD is frequently a source of embarrassment to his family, teachers, and peers. Perhaps an appropriate summarization of the child's overall behavioral pattern would be "even his grandparents find it hard to love him."

7. *Disorders of Memory and Thinking.* Dr. Sam Clements in 1966 adequately described disorders of memory and thinking by compartmentalizing them into several categories: (1) poor ability for abstract reasoning, (2) thinking generally concrete, (3) difficulties in concept formation, (4) thinking frequently disorganized, (5) poor short-term and long-term memory, (6) thinking sometimes autistic, and (7) frequent thought perseveration. It is obvious that disorders of memory and thinking overtly affect and disrupt normal household and schoolroom performances.

8. *Specific Learning Disabilities.* Children with minimal brain dysfunction syndrome probably have their greatest difficulty with arithmetic; although no one subject is easily learned. Rote memory of math tables is less of a problem than the application of arithmetical principles to problem solving. Overall academic performance is substandard in reading and writing. The child with MBD has marked difficulties managing abstract concepts such as time and space. Educational challenges requiring an intact visual-motor-perceptual interplay are virtually impossible to master.

Compounding the handicap of specific learning disabilities is the unwelcome and sometimes intolerable behavioral abnormalities demonstrated in the classroom. The combination of learning deficits and behavioral problems makes for an impossible academic career in an unmodified educational setting.

9. *Disorders of Speech and Hearing.* The child may exhibit a variety of disorders of speech and communication. As a consequence of auditory perceptual handicaps the child may have impaired discrimination of auditory stimuli. His language development may be lagging. In addition, there may be varying degrees of speech irregularities and/or mild hearing losses.

10. *Equivocal Neurological Signs and Electroencephalographic Irregularities.* Unfortunately, physical and laboratory examinations reveal no pathognomonic signs of this disorder. The neurologic findings are often referred to as "soft" signs. These are findings that are subtle

in character, mild in degree, and not infrequently observed in normal, non-brain-injured children. At best these equivocal neurological signs may serve only to arouse an index of suspicion. Perhaps, with somewhat greater frequency and slightly greater severity, the child with MBD may exhibit transient strabismus, dysdiadochokinesis, mixed or confused laterality, mild choreiform movements or tremors, reflex asymmetry, general awkwardness, and fine motor incoordination. Similarly the electroencephalographic (EEG) findings are nondiagnostic. There are no specific changes associated with MBD; on the contrary, it is quite common to have the tracings interpreted as nonspecific in nature, followed by a request to repeat the test. An abnormal EEG does not conclusively indicate an organic brain lesion nor does a normal EEG exclude the presence of an organic lesion. In many patients with MBD a borderline normal or borderline abnormal EEG is found; an abnormality without specificity.

The ten signs thus far reviewed constitute the classical concept of the symptomatology of minimal brain dysfunction syndrome. An additional finding frequently encountered among patients with MBD is *destruction of self-concept*. The child with MBD may find it consistently impossible to please his parents and teachers. Often the youngster is shunned by his peers. With these problems, coupled with inability to achieve academically, the youngster may become frustrated and depressed. The position of always being low rung on the ladder, the outsider, the loner, eventually takes its toll in personality and character development. Not infrequently, these feelings of poor self-concept are reflected in responses offered in psychological and psychiatric interviews. Commonly this lack of self-esteem, the negativistic attitude about himself, is characterized in immature self-portraits; drawings which lack character and detail and are of poor anatomical quality. Repair of the child's ego may be as pressing a need as his ability to orient letters in space.

The citing of the ten signs of minimal brain dysfunction syndrome has an inherent, potential danger. Using these signs as a yardstick to measure a patient's degree of involvement or as a prognostic instrument is unjustified. Stressing any one sign or a combination of signs to confirm a diagnosis of MBD is similarly untenable. Signs and symptoms should serve as indices of suspicion. As Clements phrased it,

> The sign approach can serve only as a guideline for the purpose of identification and diagnosis. The protean nature of the disability is the obvious conclusion from the approach to symptomatology and identification taken above. The situation, however, is not as irremediable as it might appear. Order is somewhat salvaged by the fact that certain symptoms *do* tend to cluster to form clinical entities (1).

Diagnosis

It is unusual for a child to be evaluated and diagnosed as having minimal brain dysfunction syndrome before reaching school age. Deviant behavior may become more meaningful when the child cannot cope with the pressures of the educational system. The teacher and the school authorities are generally credited with initiating diagnostic examinations. The teacher is usually the first to objectively recognize the behavioral abnormalities and learning deficits in the child who does not seem to be retarded.

The diagnostic program by necessity will be quite variable in scope and depth depending upon available facilities, funds, and levels of concern. Although a comprehensive interdisciplinary evaluation approaches almost an Utopian form of analysis available manpower does not make this approach very realistic. Perhaps more emphasis should be placed on the value of screening tests as performed by educators, psychologists, and physicians. Ideally, the combined skills of physician, educator, psychologist, and other professionals should be readily available.

Treatment

General Program. A well-constructed therapeutic agenda for the child with minimal brain dysfunction syndrome employs the skills of professionals from various disciplines: teacher, physician, psychologist, speech therapist, and, less frequently, psychiatrist and physiatrist. Success depends upon families who understand the nature of the child's problem, who appreciate his strengths and can compensate for his weaknesses, who are familiar with the trials and tribulations of therapy, who can be more tolerant of the behavioral difficulties and can cooperate with the professionals involved in the general plan of treatment. The child with MBD may be more seriously handicapped by unknowing or uncooperative parents than by any other weakness in the therapeutic regimen.

The physician has multiple functions to perform: (1) assisting in establishing a diagnosis (he may be responsible for initiating diagnostic studies); (2) perhaps coordinating the program of diagnosis and therapy involving many professionals; (3) interpreting findings and objectives for parents, securing and maintaining their confidence and cooperation; (4) he may be called upon to counsel the child, particularly the older child; and (5) be responsible for managing drug therapy when medications are indicated. Often the physician may be required to counsel the parents regarding controversial approaches to therapy as well as to interpret the advice of well-meaning but uninformed friends and family.

The teacher may similarly be faced with a multifaceted role in the management of a child with MBD. The teacher may be called upon to (1) recognize the disorder, (2) apply special skills in helping to treat the syndrome, (3) counsel parents regarding the nature of the problem, and (4) appraise the success of the prescribed program. Teachers assigned to special classes for children with MBD are continually challenged to utilize patience, warmth, and understanding as well as talents in order to insure an effective educational curriculum and environment.

Drug Therapy. Unfortunately there is no panacea, no cure-all, no wonder drug for the behavioral and educational difficulties encountered with minimal brain dysfunction syndrome. The pharmacological approach to MBD is directed primarily toward controlling or modifying hyperkinesis and improving ability to learn. The drugs selected by a physician in large measure depend upon his experience with a particular medication. The answer to the problem of MBD does not rest solely in the texts of pharmacy; however, their value as an important adjunct in therapy should not be minimized. One aspect of current research is the development of drugs to help serve as diagnostic devices in screening of the various types of hyperkinetic behavior.

Education Management. In general, educators are in agreement that the child with MBD requires special attention. The class should be small; and, ideally, the classroom should be free of distracting auditory and visual stimulation. In order to minimize distraction, room to roam, and the mass approach to teaching, the room should be subdivided into work cubicles for each student. To decrease extraneous auditory and visual stimuli, carpeting, acoustic-tile ceilings, and bland-painted walls are recommended. Needless to say, the child with MBD should be with children having a similar problem; competing (and continually losing) in a setting with normal children becomes frustrating and eventually creates a feeling of hopelessness. If a child's peers have similar problems, the atmosphere becomes less challenging, less demanding, and less frustrating. Usually ten to fifteen pupils are the maximum a teacher can handle efficiently.

This is one approach. Greater emphasis is now being focused on the use of resource teachers working with pupil and teacher. In addition to meeting a manpower need, the resource teacher program protects the integrity of peer relationships. The youngster with MBD is not singled out as being different; he learns to grow in a heterogeneous peer society.

Home Management. The home environment is designed to complement the structured and orderly routines adhered to in the classroom. Regular times for meals, bedtime, playtime, required household chores, and TV viewing are most desirable. A well-organized program for the child at home is the counterpart of his structured school schedules. It is of interest that the degree of hyperkinesis is apparently diminished in a structured environment, a setting which provides the child with fewer unexpected challenges.

Prognosis

Minimal brain dysfunction is a relatively new entity and consequently long-term follow-up studies are unavailable; accurate prognostications cannot be rapidly formulated. A conservative analysis indicates that perhaps the future of these children is not as serious as imagined at first glance. The hyperactivity and distractibility seems to disappear spontaneously by the time the child is 13 or 14 years of age. Similarly, the "soft" neurological abnormalities are outgrown; clumsiness abates and coordination is refined. Inasmuch as the child with MBD wears no visible brand of his handicap, he is eventually assimilated into the community. Is this then a problem of major significance that warrants so much concern? Are the efforts in diagnosis and management overemphasized?

It appears that early diagnosis and management (1) prevents disruption of family life, (2) allows for the development of better school habits and school achievement, (3) decreases the potential for delinquency, (4) improves the social interactions with society and the peer group in particular, and (5) improves the self-concept and decreases the potential for the development of emotional conflicts. In essence, the prognostication is that therapy will enhance the child's ability to overcome obstacles that take their toll during his developmental period and be carried over as handicaps during his adult years.

In retrospect it can be speculated that perhaps many of the school dropouts, the problem children of generations past, were really victims of MBD. These school failures or borderline passers, who dropped out of school at the legal age and were assimilated into the general population, carried with them a dormant intellectual potential. Perhaps the severely emotionally involved terminated their academic careers as patients in child guidance clinics or as defendants in juvenile courts.

From our limited experiences with children having MBD and attending special education programs in both public and private schools, the future appears to be somewhat more optimistic. We have seen a general improvement in function, in academic performance, in emotional and social adjustment, as well as in relationships with parents, siblings, and peers. Many children have gradually, others more rapidly, been returned to regular classes following handling in special education programs. Among the group of children for whom medical and educational programs have been less effective the social adjustment has been much greater and the emotional consequences less severe. Although early results indicate a basis for optimism, the ultimate value of these specifically designed programs must be determined when long-term studies are available.

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THE SPECIAL EDUCATION/GENERAL EDUCATION INTERFACE, AND THE INTEGRATION OF PROFESSIONAL TRAINING*

Dr. H. Gene Hensley

We are in the midst of a revolution in education. The subtle signs of a few years ago which indicated impending change in education are no longer subtle. The cries for relevance and involvement have increased, and the list of declared inequities in education grows longer. Increasingly, one hears that the current academic system is failing children, adolescents, and adults. There is greater ferment and interest in the educated, the noneducated, and in the status of education than ever before in the history of this nation.

It would not be appropriate to enumerate here the social problems facing our culture. It is sufficient to point out that education and educators are being criticized as never before and that a major demand from within and outside the educational professions of our society is for organized change; change from stressing the ways of the past to planning for the future of contemporary children and adults.

Numerous writers have commented on the problems, failures, and the unrest in our schools. Wright (1) has suggested that our present educational system is contributing more to problems than preparing students to solve them. Chickering (2) has commented on the large number of students who drop out of our schools.

A recent article in the January issue of the *Phi Delta Kappan* noted that in 1971 more educators will spend more time looking ahead

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than looking in the past. Educators everywhere have pointed to the failure of our schools to prepare children and young adults, particularly minority students, for life in general.

Special Education

Special education programs in the public schools and the corresponding teacher preparation programs in our universities have not been immune to criticism of the current educational scene. In some respects, special educators have been the hardest hit by critics, and the most resistant to change. As a field of specialization, special education emerged in response to a challenge to general education to serve all children. It took as its chief responsibility the education of this nation's large population of handicapped and other exceptional children. Numerically, special education and its technology has grown rapidly, but past and present administrative arrangements and strategies for serving exceptional children have been criticized as inefficient, and even discriminatory. Specifically, the major criticism has been that, given existing patterns of preparing teachers and serving children, special educators may be losing ground. In other words, the number of children in the mainstream of our public schools who require very special attention has not significantly decreased. Closely related to this idea is the fact that both the training of special educators and their organized services to handicapped children have become increasingly disassociated with general education. It might be said that special educators have professionalized themselves out of elementary and secondary education, interacting only when necessary, and sometimes offering parallel services and training. Further, the categorizing and labeling inherent in special education (e.g., mental retardation, emotional disturbance, and neurological damage) has been criticized and declared irrelevant to successful educational diagnosis, remediation, and instruction.

A recent conference sponsored by WICHE focused on changing patterns of services and training in special education. Its purpose was to identify the tasks of teachers and administrators in various fields of special education and to relate these tasks to competencies needed by teachers and to the content of teacher education programs. Many participants at this conference called attention to problems which echoed the conference theme. William Hall (3) posed the following questions:

1. How can we rid ourselves of the categorical concepts of exceptionality from both public school and university thinking?
2. How can universities overcome the "red tape" and professional rivalry which stands in the way of training teachers within an interdisciplinary framework?
3. How can we rechannel our thinking into creative approaches to special education?

4. Is it possible to prepare individuals to react in innovative ways when our preparation is done within a traditional institution?
5. Can we put aside our provincialisms, our empires, our petty ego defenses and interact meaningfully in building educational methodology based on learning characteristics?

Special Education/General Education Relations

It has been more than 20 years since special education had its first impact on instruction in the public schools and on the design of post-World War II teacher education programs. At that time, the common boundary of special education and general education was of great concern to most educators. This concern was exemplified by an often heard education cliche, "special education must be a part of and not apart from general education." In time, definitions of special education became increasingly circular: e.g., "special education is that specialty which deals with exceptional children"; "exceptional children are those children who are served by special education." The dichotomies increased. The categories multiplied. The gaps widened. Finally, special education by definition was for the children regular education could not adequately serve, and the special school of the special class established along some categorical line became synonymous with the concept of special education.

In a sense, special education was at some point victimized—and accepted it. Special educators willingly and with few reservations assumed responsibility for thousands of children that regular education wanted as little to do with as possible—and it is still doing it. The special class concept was in trouble from the beginning, or at least it was just a matter of time until the problems associated with this administrative procedure were to catch up with us. From the start it was a clumsy idea at best, one which didn't have a chance of working for long when one considers the rapidly expanding school population and the concomitant increase in the number of exceptional children who would require those services offered so freely by special educators.

The saturation point has now been reached. Services in the form of special classes or similar arrangements are not available for those who need them most. Worst of all, there is the haunting idea that there may be better ways of teaching and caring for children, particularly when one considers that the majority of handicapped children are now, have always been, and will continue to be found in regular elementary and secondary classes taught by regular classroom teachers. Further, the teaching is sometimes inferior because educational personnel lack the skills to deal with complex learning problems. If they could only get rid of these problems by giving them to special educators! On this point, an increasing number of special educators now stand firm. It is a new commitment, this idea that most handicapped children can be best educated in regular classrooms, providing their teachers have the necessary skills and appropriate attitudes.

The separation of special and regular education which has existed for the past several years has been artificial and unnecessary. There is a common ground on which regular education and special education have built their foundations and developed their structures. Like the children served by special educators, there are more similarities than differences when special and general education are compared. A change in one area can produce a change in the other. Modifications in our values, our professional knowledge, and our educational technology, whether associated with regular education, special education, or with other institutions in our society, can have a resounding effect on what happens in the public school classrooms and in our teacher training institutions.

Educational Change

Historically, special educators have viewed themselves as innovators. Even more important, they have been perceived by other educators as being at the forefront of change, defining new target populations for educational services, challenging traditional methods and procedures, and standing as advocates for children who might not be adequately served by other educational programs.

Special educators have been effective in public relations. Initially, they sold their programs beautifully. Their causes were taken up by thousands of interested and sympathetic lay persons who saw gaps and weaknesses in the regular or more traditional education programs. In years past, it was not unusual to hear expressions of disenchantment with general education in the form of "special education is what regular education ought to be," meaning that special educators were in tune with the times; sensitive to the needs of children, parents, and to the deficiencies or limitations of our educational system. Now the ranks of teacher education programs have been swelled by special educators who are once again dissatisfied with things as they are in teacher education, and this time with special education itself. There is an eagerness to modify, supplement, or even replace existing strategies and training models in special education.

As for general education, it will never be the same again. Thousands of recent changes have occurred in the design and production of instructional media, in organization and management systems, and in the teacher-learner communication processes. These changes have enabled regular classroom teachers and others to attain educational goals that at one time were considered impossible.

It is only the beginning. There has truly been an explosion in the development and utilization of educational technology which allows teachers to be much more resourceful in the classroom than ever before. Perhaps it is now general education, not special education, that is the forerunner and the innovator. In some ways and in some places, special education has become increasingly provincial; it is in need of a new focus. Indeed it has contributed greatly to the development of materials, ideas, and accomplishments of general education, but in recent years it has been relatively divorced from some of the important social movements, curricular developments, and populations in need of improved educational services, particularly ethnic minorities and children from innercity and rural-poverty areas. The stress on humanistic education has not been ignored by special education, but it has not been given the attention one might expect from those who profess a dedication to serving deviant and hard-to-reach children.

Continuity and Contiguity

It would seem that any concern with continuity and contiguity in special education and regular education of necessity would involve the identification of the commonalities and the differences between special and general education. In this regard, I would raise the following questions for your consideration:

1. What societal and cultural changes affecting regular education might have particular significance for special education as it is now conceptualized?
2. What changes in elementary and secondary teacher education, relating in particular to curriculum, evaluation, administration, and technology, have implications for the preparation of special education personnel?
3. In what ways might special education benefit regular classroom personnel? Is there a body of knowledge or skills exclusive to special education which might be of direct benefit to regular classroom teachers?
4. Are the values and attitudes of special educators toward children and toward learning significantly different from those of regular educators?
5. Are there practical alternatives to our present patterns of teacher preparation?
6. Are there existing models for bringing about cooperative training activities involving both general and special education?

Many special educators, like some general educators, have been radicalized to the point where they are unwilling to continue teaching or training in a traditional role, or even in a partially modified one. They believe that drastic changes in teacher education are not only necessary but unavoidable. They want totally new models for providing services and for designing professional preparation programs. They applaud curricula that involve all children, not just handicapped children, and all of education, not just special education. Most of all, they seek a new and more relevant focus. Many general educators, too, feel this need. Are special educators the only ones who have the temperament and the techniques for successfully coping with the more difficult instructional and behavior problems? Cannot regular teachers be more effectively prepared to work with the complex behaviors of children with which they must routinely deal? Is special education really that different?

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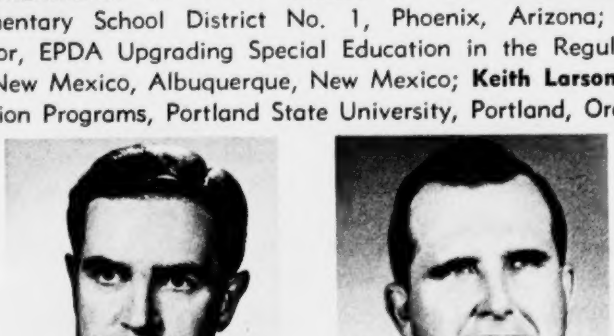
SYMPOSIUM MEMBERS: (L. to R.) **William F. Hall,** Director of Child Study Services, Elementary School District No. 1, Phoenix, Arizona; **Benjamin L. Brooks,** Director, EPDA Upgrading Special Education in the Regular Classroom, University of New Mexico, Albuquerque, New Mexico; **Keith Larson,** Coordinator, Special Education Programs, Portland State University, Portland, Oregon.



Henry J. Bertness, Assistant Superintendent, Pupil Personnel Services, Tacoma Public Schools, Tacoma, Washington; **Robert Gilberts,** Dean, College of Education, University of Oregon, Eugene, Oregon. Not pictured: **Everett V. Samuelson,** Dean, College of Education, University of Idaho, Moscow, Idaho.

SYMPOSIUM: DISCONTINUITY IN GENERAL/ SPECIAL EDUCATION

Presenters: William Hall, Everett Samuelson, Ben Brooks,
Keith Larson, Henry Bertness, and Robert Gilberts

Dr. William F. Hall

It appears to me that in discussing the point of discontinuity the most important question we should ask is, "Who put it there?" I suspect we did. For many years special educators have worked in building programs to supposedly improve the lot of exceptional children. Obviously while doing this we developed all sorts of rationale to support our positions. The more we did this the more we became enmeshed in our own creation.

At first in our relationships to general education we posed no threat. In fact, we were viewed as a sort of an "educational Mr. Klean," but, as time passed and we sold our program, more and more we began to corner the market on certain things—like money, equipment, supplies, teachers. We began to develop specialties and subspecialties, some of which at this point are probably artifacts. We emphasized and reemphasized, and perhaps overemphasized, minor differences in children to enhance our programs and prestige. It was prestigious not just to be a teacher, but to be a "special" teacher. Thus, over the years many of the categories were born.

Obviously the categories were not created only by educators. Many of the categories, probably most of them, were creations of the medical profession. However, more recently we have seen that certain categories, such as learning disabilities, seem to be created by the education profession itself. It might be well to point out at this juncture that many of the special education programs arose out of needs of children which were not being met by any other institution. There were numbers of children handicapped in various ways for whom no programs were available in the regular education scheme. Thus it became necessary, in some cases, to create new programs to assist these children in getting their rightful share of the educational pie.

As time passed, much of the talk revolved around "our programs" versus "their programs." Even at the college and university level it was "our college or department" versus "their college or department." It was "our children" or "their children"; seldom did anyone talk about just plain children. Perhaps we further increased the discontinuity by our attempts to lure the best teachers into special education, even at the expense of robbing them from regular education. We tried incentives, even to giving pay differentials, to special education teachers. As these programs developed it became incumbent upon the universities to train special teachers for the public schools. This meant that colleges and universities began to attract more and more programs out of the mainstream of regular education. We agonized over the fact that regular education teachers did not know enough about special education, while blithely building training programs that ignored or minimized entire areas such as child growth, psychology, and sociology. An entire sequence of thirty semester hours for a master's degree could be gotten within a special education department. This might consist of X number of hours of survey, X number of hours of diagnostic and remedial courses, and X number of hours of methods of teaching the categorical child. The chink between regular and special education became a crack and finally an abyss. Now we are at the point where we find it necessary to try to pull back together or perhaps bridge this abyss.

Well, where are we now? I suspect partly we are here at this conference because in many ways the system is grinding to a halt. Maybe we have overdone it; maybe we have run out of categories and thus lost some of our thrust and are becoming impotent. It would appear that at least partly the pressure is on. Probing questions are being asked about the efficacy of special education programs. We are being challenged to show that reducing class size to, say, eight children while increasing the cost two to three times that of regular children is paying off. No system, including the federal government, gives large sums of money to any program for very long without asking for some kind of accounting. The accountability concept is here and special education administrators will have to deal with it.

As an aside, I might note that we appear to be in a period of a surplus of teachers, especially regular teachers. I would suspect the pressure will mount to put many of these regular teachers into some form of special education programs. Obviously many of these will be skilled teachers, and we will be required to defend the concept that all of our demands for extra training and extra money in special education are justified. I would think that this may have far reaching consequences for the field of special education. Historically, not many voices were raised against the empire building that has gone on in special education. Back in 1954 or so Dr. Francis Lord in a speech and article tried to interject a cautious note about the separation between regular and special education, but no one really listened. It wasn't until Lloyd Dunn's famous, or infamous, article (1) that we really began to question some of our placement practices in the field of mild mental retardation. Perhaps this was needed to open up a

Pandora's box of questions and concerns about the entire concept of categorical special education. Certainly it does not appear to me that special education per se is doomed. However, it does appear to me that we are going to have to look to a more meaningful alliance between special and regular education. Further, it means a hard look at all of the kinds of children being placed in various special education settings to see whether or not this is really the most efficient and meaningful program for the children. It may well be that for some of our special education children placement back in the regular classroom will provide a superior education at many levels. This is a decision special educators should have a large share in making.

There are certain hard questions that we need to pose to ourselves and to regular education which might help all of us clarify our relationships. One question might be, Are we really talking about the same thing when we say special education and when we say regular education? Can we really define our terms? Clearly, until we have some common communication ground, we will be distrustful and uneasy with one another. A second question might be, Do we as special educators believe that there is a body of knowledge about teaching special children which varies significantly from one disability to another?

A third question is, Is it possible for educators at the college and university level and the public school level to meaningfully interact to shape up new programs for training all teachers? I suspect the real question is, Do we respect each other enough to believe that we can learn from each other? A question of great currency is, How does the concept of accountability affect teacher training and special education program development? Will we need to modify programming to better fit the accountability pattern? Are special education programs and regular education programs to be held accountable to the same degree and in the same way?

Perhaps at this point I might propose some drastic actions with which I am sure many of you will violently disagree: First I propose that a moratorium be declared on establishing any more categorical special education classes or programs in public schools. This might even include some of the more severe disabilities. During this time we would examine rather closely our basic premises in regard to the establishment of these programs.

Second, we should declare a moratorium on developing any new programs or courses in special education at colleges and universities. Any staff changes should be the result of integration or sharing of current staff available in other departments and colleges of the universities.

Third, I would recommend that all staffs in the public school take a year to study the role and relationship of special education to regular education in their school. The main thrust of this should be to see if it is possible to reduce the involvement of special categories and thus return more and more children to the regular classroom.

Finally, all college and university staffs should take a year for joint planning with one major objective—to reduce the number of special education courses and to increase the number of joint and integrated courses and thus increase every teacher's efficiency.

Undoubtedly these are difficult concepts to deal with. However, we are coming into difficult times in the field of special education as well as regular education. Perhaps also for this year we ought to establish a taboo against the use of any words like "special" or "regular."

In summary, it appears that what is happening in the relationship between special education and regular education we have brought upon ourselves. Now it is time to rethink our basic premises in both fields and try through mutual cooperation to solve the educational problems of all the children in the public schools.

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Dr. Ben Brooks

Before any discussion concerning continuity in general and special education can begin, the fact that special education for too long has been apart from, rather than part of, regular education must be recognized. Special education has for too long been predicated upon failure. In order for a child to enroll in special education he must have first failed an I.Q. test (I.Q. less than 75), failed to live up to the behavioral code, failed an achievement test, and in most cases failed several grade levels. The point to be made here is that many regular educators are not aware of this condition and expect some sort of a miracle to take place once the child enters the special education classroom. By definition, special education consists of the modifications of, or additions to, school practices intended for the ordinary child—practices that are unique, uncommon, of unusual quality, and in particular are in addition to the organization and instructional procedures used with the majority of children. I would like to emphasize that special education by theory is not a total, isolated program, but rather a continuous service over and above regular education.

Many authorities have raised the question, What is special about special education? Many of us in the field find it very difficult to answer, mainly because of current practices as they now exist. Before we can even begin to elaborate upon the relationship of regular to special education, we must at least make an attempt to bridge the gap between theory and practice as it now exists in special education.

I agree with Lloyd Dunn (1) who states,

> . . . much of our past and present practices are morally and educationally wrong. We have been living at the mercy of general educators who have referred their problem children to us. And we have been generally ill prepared and ineffective in educating these children. Let us stop being pressured into continuing and expanding a Special Education Program that we know now to be undesirable for many of the children we are dedicated to serve.

I don't believe I really need to elaborate upon most of the current practices we now have for dealing with the majority of our exceptional students in the public schools. I only need to mention that, as it now exists, theory does not coincide with practice in special education. When this occurs one or the other must of necessity change.

If it is true that only 40 percent of the exceptional children are receiving services, the apparent place to begin is with the practice of educating this segment of our population. The logical starting point would be with the institutions of higher education that are training future teachers, whether they are to be general or special personnel. With 60 percent of the exceptional population now found in the regular classroom, this should be the priority in training all future teachers.

Perhaps training programs need to be developed with an entirely new theoretical basis with coinciding practices. I could envision within education training *special-special* education and *special-regular* education approaches. It is known that there will always be a need for self-contained, isolated programs for approximately 5 percent of the exceptional population. We as educators and as humanitarians are willing to accept this and perhaps this would be our *special-special* education approach with theory and practice to match.

The *special-general* education approach would meet the needs as they now exist for all students in public education. Education would be relevant to the social change and revolution as it now is evolving throughout the country. No longer would elementary teachers be required to take two courses in music, two courses in art, courses in how to teach reading, writing, and arithmetic. New courses covering the aspects of cultural diversity, cultural awareness, and other relevant areas in dealing with minority group problems would evolve. Education would take a humanistic approach to teaching children whether they be exceptional, regular, or high-risk children.

As a result of this *special-regular* education approach, a new multiphasic approach to educating all children and allowing them the opportunity to remain in the mainstream of education will evolve. Alternate approaches will be developed with the following specific objectives:

1. To provide adequate training for regular classroom teachers and administrators as related to the individual needs of the mildly handicapped children within their regular classrooms.
2. To develop teacher and administrator sensitivity and more positive attitudes toward mildly handicapped children within the regular classroom.
3. To develop an understanding as to how a handicapping condition affects learning, and to identify strategies for assistance or remediation.
4. To be capable of identifying, diagnosing, and selecting appropriate educational approaches and prescribing instructional strategies for mildly handicapped children within the regular classroom.
5. To develop units on cultural diversity that will enable regular classroom teachers to become aware of any unique socioeconomic, geographic, or cultural problems related to special education in the regular classrooms.

In conclusion, perhaps at this time it might be somewhat presumptuous of professional educators to be discussing continuity of special and regular education when we have not yet resolved the continuity problems of special programs with special education, or for that matter regular programs within regular education.

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Dr. Keith Larson

There are three teacher attitudes which I would like to present as significantly preventing immediate improved contiguousness between special education and regular education. For the sake of promoting discussion, I have deliberately omitted any qualifying statements for the assertions made. My objective is to present, illustrate, and discuss these three selected attitudes which I believe are held by special educators to a significantly greater degree than by teachers in regular education. I believe in a null hypothesis fashion that until teachers in regular education hold these attitudes to the degree that special educators do, handicapped children will not be best served by the regular education program.

The three selected attitudes are as follows.

1. Special education teachers are more willing to accept children in a greater variety of packaging arrangements (appearance and social deviancy) and still maintain a greater feeling of each child's worthwhileness than are teachers in regular education.

2. Special education teachers are more willing to accept a wider variety of pathways to human dignity than are teachers in regular education for whom academic success is the only route or vehicle normally considered respectable.

3. Special education teachers are more willing to accept the responsibility for a child's failure to learn than are teachers in general education.

In the first attitude I indicated the willingness of the special education teachers to accept variety of packaging. While I certainly accept the fact that in any given class of 25 regular second-grade children there are 25 individuals, I maintain that deviation possibilities in appearance and social deviancy are considerably less among children in regular education, who are usually without major physical or sensory deficits. Most regular education teachers react with two immediate concerns about children who are handicapped and who may be possibly assigned to their classes: (1) Their appearance is upsetting to me and will be upsetting to the children in my class, and (2) what type of educational programming is required for these youngsters? A special education teacher, on the other hand, would have the ease of acceptance that comes from understanding the specific etiology of various physical problems and the potential level of development of children who have any of a variety of problems. Furthermore, experiences the specialist has had in trying to teach such handicapped children provide her with considerably more confidence to achieve success in areas of developmental skills. However, even more important in this first attitude is the acceptance by the professional special educator of the child's worthwhileness or right to human dignity regardless of the phenotype (package) of a particular personality.

I assume that most education professionals would not quarrel significantly with the statement that personal individual fulfillment is the first responsibility of an educational system. My contention is that a special education teacher believes this to a significantly greater degree than a teacher in regular education. To illustrate this point we might draw an analogy to handicapped children from the phrase "black is beautiful," a phrase utilized by another segment of our population seeking improved opportunity for personal individual fulfillment. The meaning of this phrase is precisely what it says. With no qualifications added, no stipulations demanded, no academic determinants, no physical standards to be met, "black is beautiful." Every individual has an innate right to be accepted as worthwhile. I contend that a special educator is much better prepared to state that cerebral palsy is beautiful than is a general educator. A special educator is more capable of saying deafness is beautiful than is a teacher in the regular program. I am attempting to emphasize that I believe a special educator to be significantly more capable of looking at a blind child and seeing a worthwhile child than is a regular educator who sees blindness.

The second of the three attitudes indicated that special education teachers are more willing to accept a wider variety of pathways to human dignity than are teachers in regular education for whom academic success is normally the only respectable route or vehicle. It is incredible—and sorrowful—to see a society claim to be open and yet have but one chief avenue, scholastic success, of approved entry into the mainstream of human dignity. It seems incredible that personal individual fulfillment has been defined by regular education as being founded on a single universal academic standard. Special educators would find nothing startling with Arnold Toynbee's statement ". . . we must recognize that there is a diversity in human gifts and that this diversity is valuable to society."

Academic learning is not for everyone. Learning as an all-consuming act of personal faith and commitment can only be for a relatively few, even in regular education. To produce a whole generation of savants is neither possible, nor in fact desirable, for in that circumstance the workings of society would soon grind to a halt. Special education teachers are more willing to agree and to reject the idolatry of academic learning as the only worthwhile pursuit for children. A special educator more easily finds acceptable success in economically self-sustaining vocational efforts, in sheltered workshop efforts, in improved communicative skill development, improved motor skill development, improved interpersonal relationship skills, and innumerable other nonacademic areas of success.

While attempting to illustrate this significant difference between special educators and teachers of regular classes, I feel obligated to point out that our society, as compared to other specific societies such as in the Scandinavian countries, does provide fewer routes to human dignity for the handicapped. Those of you who have heard Jean Edwards on our staff describe her tour last year through special education and rehabilitation facilities in Northern Europe know that in those countries dignity is available to the handicapped in many more ways than in the United States. Community centers for both recreation, crafts, socialization, and for production-type efforts are available to Sweden's handicapped. They also have available to them more opportunities for noninstitutional living arrangements. In Sweden, unlike our country, severely handicapped couples may share the love and dignity of marriage without regard to the scores on a California Academic Achievement Test or a Wechsler Intelligence Scale.

The third of the three attitudes stated that special education teachers are more willing to accept the responsibility for a child's failure to learn than are teachers in general education. It is common knowledge that the easiest place for a poor teacher to survive is at the university level. Here, regardless of the manner in which a professor offers an explanation, the students, being a selected, screened group, are probably capable of deducing what the professor has in mind. When they respond appropriately, he feels he must be doing a good teaching job. The same process works its way down through the lower grades to where a second-grade teacher, receiving an 80 percent appropriate response from her class after a teaching effort, assumes the teaching is flawless; 20 percent of her children are too stupid or too handicapped in other ways to learn. The questionable luxury of ignoring possible deficiencies in teaching skills through assignment of all responsibility to the consumer, the child, is not apt to be part of a special educator's attitude.

Let me illustrate this point further by describing an obligation we require of our full-time students in special education at Portland State University. During each week of the three academic-year terms, our students work regularly with a handicapped child. This sustained effort is undertaken at the child's home (with the concomitant parent interface), at school if the child is of school age, and at our clinic with other students and faculty observing the teaching effort and providing feedback to the student being observed. The students normally form a team with two or three students organizing, developing, and monitoring a developmental program for a single handicapped child. We mix our students on these teams without regard to categories of handicap. The requirement for sustained effort serves two purposes: (1) It prevents the common pitfall of many university clinics in which brilliant diagnostic statements are the primary output with no one required to live with the pronouncements or to demonstrate procedures for developmental progress, and (2) students have the experience of personally making a difference with a handicapped child.

My purpose is not to describe a portion of a training program for specialists but to indicate the circumstances under which two students are working with a handicapped child.

John lives about three blocks from the University in an older home with his grandmother. He is seven years old and visually handicapped (partially sighted). He has been kept primarily in two rooms of the house. Although there is a park directly across the street, he hasn't been taken there because the grandmother is afraid he will run away and she won't be able to catch him. She just hasn't bothered to send him to school. The multiple overlay of problems is obvious.

I am suggesting that a regular second-grade teacher would be most reluctant to accept John because his vision problem is too great, he is emotionally disturbed, he is mentally retarded according to his present ability to do academic work, his social skills are inadequate, etc. In anticipation of comments relating to the class size of a regular second grade, I am suggesting that the teacher's reluctance would be as great if she had a class load of only four or five children.

John and his problems have frequently been discussed in large group seminars with most of our special education students. In all of these discussions, in all of the informal sessions in the student lounge or in the observation rooms, I have yet to hear anything except instructional procedure inadequacy questioned as a reason for John's inability to improve on a particular developmental task. The phrase I hear these future special educators say about themselves is "evidently we haven't yet gone about teaching this child in an appropriate way for him to learn this particular task." John has never been accused of inadequacy.

Special education teachers are more willing to accept responsibility for a child's failure to learn than are teachers in regular education.

To summarize, we can talk all we want to about administrative reorganization of services to handicapped children. Eventually a child will be the responsibility of a teacher. As yet, I see little in regular teacher training programs to promote the three attitudes I have mentioned.

May I emphasize that I am not making a stand for the maintenance of any particular administrative arrangement such as homogeneous classes for the mildly retarded. As any experienced school teacher would point out, it is what happens to the children after they are brought together that is of significance. A particular administrative arrangement could be good; it could be poor. To argue over two alternatives of administrative arrangement or against one specific alternative as applied to an incredibly wide variety of handicapped children's problems seems to me to be an academic exercise without end.

Good educational placement for any child depends first on the teacher's competencies and attitudes as related to that particular child; second, on how that child will respond to the circumstances of the placement; and, third, on how neatly a single administrative system, or the culling out of a particular portion of it, can be applied to the total population of handicapped children in every corner of the United States.

As we discuss under what circumstances a wider range of individual differences can be accommodated in regular classes, it would seem to me most necessary to keep more emphasis on teacher competencies and teacher attitudes than on administrative structure if we are to derive practical results from a session such as this.

Dr. Henry J. Bertness

Discontinuity. What can be said? Perhaps a few things should be said very quickly and then we should move on to more fertile ground.

Discontinuity exists.
Discontinuity is damaging.
Discontinuity can be corrected.
Continuity can be achieved and will be effective.

Some might argue with these assertions, but most people familiar with general and special education in both higher education and public education will tend to agree. The handicapped child and the so-called normal child both receive less where discontinuity exists and both receive more where continuity has been achieved.

But where do we start to work on this problem? Everywhere. No one has a corner on either blame or success. No one has found the sure-fire solution to continuity and no one can take exclusive blame for the lack of continuity. There is a separatism that we find in various sectors dealing with education. In fact, separatism between general and special education is more general than unique. There is separatism in school districts; there is separatism in teacher education. There is separatism in the minds of educators, both in higher education and in public education. There is separatism in the public mind. It is very tempting to say that the separatism in the public mind is a reflection of the separatism that is found among educators, teacher education, and school districts.

But where do we start, we who are in public education and in higher education? Obviously we start with us.

Comments on Our Scene

For a long time many of our words and directives have asked us to focus on children and youth. For example, Section I, Article I, of the Constitution of the State of Washington reads:

> Preamble: It is the paramount duty of the State to make ample provisions for the education of all children residing within its border, without distinction or preference on account of race, color, caste or sex.

Not quite one hundred years ago some insightful people composed that preamble and talked about ample provisions, not just some provisions, and also talked about all children, not just some children.

If, then, public education is given some responsibility for all children, and if higher education is given the responsibility to educate and prepare teachers and other educators for all children, we must take into account the tremendous variability that exists within each child and among all children. If that is one of our givens then an either/or concept is not viable. The child is so variable and the group is so variable that any idea suggesting that these children belong there is not defensible. The child is so variable and the group is so variable that the only viable concept is one which is as dynamic as we find the children to be. What is needed here is an integrating concept that accepts all children. What is needed here is the rejection of any static either/or and the aggressive acceptance of a continuum of educational opportunity which for the handicapped child might run all the way from isolation to being full-time in the regular classroom. What is needed is the activated concept of a continuum that goes all the way from isolation to being with the group; a continuum of time, a continuum of program, and a continuum of inclusion.

Call this progressive inclusion, a changing and changeable approach for each child. Progressive inclusion exists when a child is not locked into any one program but moves progressively into the various programs of the school according to his readiness as well as the readiness and needs of the program. Call this a dynamic approach, call it flexible and changeable, call it the cascade system as Deno has described it (1).

Now if these observations regarding the variability of children and youth are valid, let us organize around them. Let us organize both teacher education and public education around these basics of human variability. Let us deal with facilities, programs, and public understanding in terms of human variability as we see it in our children and youth.

We continue over the years and even decades to hear so much about categories. Categories need not bother us. We may be offended by the miscommunication that categorization yields among the general public and even among educators, but categories need not bother us in the development of effective programs for handicapped children. What we need at this point is to practice a little bit of different separation. For example, we can obtain our money by qualifying our children through documentation in terms of categories. But then we can develop our programs on the basis of the children, not the categories. We can develop our programs on the basis of the characteristics of these children, the resources available, the settings in which we find the children, the functioning of the children, and the needs of the children. We do not have to develop the program on the basis of the money, although it is a rather firm parameter. Further, we may place children, not by categories but by program. This might be called creative placement in which the child, regardless of which category he might fit into, is placed into the program that is most suitable to his functioning and his needs. Within the program there certainly should be interaction between the program and the child, an interaction that would tend to change both the program and the child. In fact, there should be a built-in three-way adjustment through which the program changes, the staff and the parents change, and the child changes. The existence of static programs which lock the child into some form is a creation of ourselves, not of categories or categorical aid.

Categories need not bother us for we can separate three parts which are sometimes messed up into one. First, we can get our money through categories. Second, we can develop our programs on the basis of the children themselves. Third, we can develop a process of creative placement and program responsiveness to the children.

Another comment on the scene is that general education could well afford to look a little harder at the special educator as a contributing partner. Currently there is a movement that suggests that special education has had its day and really should go down the drain. This sounds a bit like an overreaction, and it sounds as though somebody wants attention or notoriety. Obviously special education can be improved and special education and general education should develop continuity. In the meantime, however, we should look at some of the contributions of special education and particularly the special educator. No one would claim here that the special educator is either better or poorer than his colleague in general education. However, there are some facts of life. For example, the special educator for years has been in a very unique position to see and experience the failures and rejects of the system. At least recently the special educator has attempted to remake the system, to refer children back into the so-called mainstream. The special educator has tended, in fact has been required, out of frustration if nothing else, to emphasize the child rather than the course of study, the child rather than the group, and to emphasize acceptance rather than rejection. In fact, the special educator has been one of the chief implementors of the gospel of individual differences. In this sense the special educator has been child-centric rather than materials-centric, a problem which seems to be running rather rampant in some parts of general education today.

Action Needed

Continuity and discontinuity are in our hands. Whatever the condition of the field, it is of our making; but the field does not need to stay in its present state of discontinuity. We can change that. We can act.

We should first insure a certain preset among the graduates who complete our teacher education programs. This preset would include a commitment to the mission of public education to serve and to educate all children, not just those who are ready, not just those who are willing. This preset should include an expectation for being a team member in the public school setting rather than working in isolation. The graduate should expect to find all children in school, not just the able. The graduate should have had experience in knowing all children and working with all children in various preservice activities. Certainly in the teacher education sequence handicapped children should have been integrated in all course and experiential work. If teacher education is not organized to produce this preset, then teacher education should get about this business. It is possible.

Teacher education should prevent fanatics from entering public education. The fanatic in this case is the person who has the one answer. What is needed is a new breed of positive reconstructionists, people who see what it is and then seek to improve it, working with what is possible. We do not need arrogance nor do we need people who are so down in the mouth that their negativism becomes destructive.

Teacher education and public education should develop parity in which both respect each other as equal partners. This partnership is not succeeding now. There is too much of a hierarchy and too much mutual distrust. Higher education seems to have the possibility of extending itself to public education. It would seem that improvement has to come from that kind of activity. There are the usual barriers, of course, the barriers of time, distance, and load; and there are also the profound barriers of distrust and unwillingness. Nevertheless, parity seems to be a worthwhile goal since both higher education and public education seek to serve children.

In public education we must certainly go beyond categories and beyond various means of separatism in programs. Separatism must yield to an interacting interdependent system of programs. Categories must submit to programs rather than programs submitting to categories. This is possible and in some public school systems this is happening today.

Public education must develop more options for children and youth. In fact, public education must turn its back on a program and go instead for a system of programs. To repeat once more, if we are to serve the children and if these children are as variable as our research has said for decades, we have no alternative but to be very pluralistic in our educational offerings. We should take a look at the cascade system proposed by Deno (1) and the responsive environment model proposed by the Far West Laboratory for Educational Research and Development (2), and we should even take a look at the process of progressive inclusion as practiced in the Tacoma Public Schools.

If we believe in continuity, and if we believe in human variability, then we must stop educating for divisiveness, we must stop practicing divisiveness, we must stop condoning divisiveness. We will not be able to stop until we get higher education and public education together.

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Dr. Robert Gilberts (presented by Dr. Wayne Lance)

A conference on special education for the general educator can be considered partial delivery on a promise I have heard special educators make in the past: "We are in business to put ourselves out of business." I will caution you, as I was cautioned, not to subject this promise to a literal translation, but rather take it to mean "We will do everything we can to return the handicapped to the mainstream of our society."

Most of us remember the days when a substantial number of the handicapped received little or no services from the public schools. If their condition were severe enough, they were placed in a state institution, otherwise they stayed at home or dropped out of the public school programs after passing their sixteenth birthday. Parents and other special interest groups began to place pressure on the public schools and the legislatures to provide a school experience that would equip these youngsters to take their place in society; not as dependents but as contributing citizens. I need not recount for you how long and hard this road has been.

Most states in the nation today have some kind of legislative provision for educating the handicapped in the public schools. Training programs to prepare various specialized educators to work with the handicapped are an integral part of many colleges of education throughout the land. Local and county school districts have developed cadres of specialists and administrators to supervise programs for the handicapped. State Departments of Public Instruction have specialized staffs to regulate and implement legislation as well as provide consultative services for the exceptional child. The federal government itself has responded by establishing a Bureau of Education for the Handicapped in H.E.W. to administer federal aid to state and local programs for the handicapped child. In addition, there currently exists a proliferation of professional organizations, research literature, and conferences to meet the expanding needs of those working and training to work with the handicapped child.

This rapid growth and development of a professional discipline offering specialized services to a segment of our school-age population has been centered around the concept of separate, self-contained, almost self-sufficient, programs. This concept stands upon a strong foundation of existing programs, legislation, and training programs dedicated to the idea of categorization; i.e., there are distinct categories of children who deviate from the norm to such an extent that they require specialized services. And, as we know, these services usually take place in "the special education room down the hall."

Perhaps the first formalized nationwide crunch in the notion of categorizing children and services came in September 1968. An article familiar to most of you and written by Lloyd Dunn, then director of the Institute on Mental Retardation and Intellectual Development at George Peabody College for teachers, appeared in the journal, *Exceptional Children.* Dunn stated,

> I have loyally supported and promoted special classes for the educable mentally retarded for most of the last 20 years, but with growing dissatisfaction. In my view, much of our past and present practices are morally and educationally wrong. We have been living at the mercy of general educators who have referred their problem children to us. And we have been generally ill prepared and ineffective in educating these children. Let us stop being pressured into continuing and expanding a special education program that we know now to be undesirable for many of the children we are dedicated to serve.

Since that article was written, special educators seem to be polarized into major camps: those who accept Dunn's premise and expand it to include other categorical areas such as emotionally disturbed and learning disabilities, and those who tend to reject the premise. As always, there are a number of people distributed between the two camps. An in-depth examination of this issue is much beyond the twenty minutes allocated to me today. Suffice to say that there is a growing body of evidence indicating that there are children who have been given categorical labels and placed in special classes when such action was not in their best interest.

While I do not pretend to have a solution to this complex problem, from my vantage point as the dean of a college of education and recently as superintendent of a large city school system I do have some thoughts on the matter. The common denominator of these thoughts is caught up in my firm belief that training programs can and should reflect the fact that general and special educators have a great deal to teach one another. The operational foundations of general education are changing to fit the notion that every child has special needs, many of which lend themselves to being met by techniques developed by special educators. In the area of specialized instruction materials and techniques, more and more commercial producers are responding to the needs of the child "who does not learn" by marketing a wide array of instructional soft and hardware for use by educators of the handicapped. In the mid-1960s the United States Office of Education established a network of Special Education Instructional Materials Centers designed to acquire such materials, demonstrate their use to educators working with the handicapped, lend them to teachers to use and evaluate, and then develop pre-service and in-service training programs to facilitate the implementation of these materials and techniques. One such center, the Northwest Regional Special Education Instructional Materials Center, is located at the University of Oregon's Department of Special Education and serves Oregon, Washington. Idaho, Alaska, Hawaii, Guam, and the Trust Territories. The SEIMC staff at Oregon has spent a considerable amount of time developing and establishing a network of associate centers throughout the region to make these services more accessible to educators on a local level. The regional center's staff complements various training programs in the College of Education by offering specific courses for all educators both on and off campus in the selection, use, and evaluation of instructional materials for the handicapped.

I believe that special educators are fully cognizant of the fact that they have a backlog of research, materials, and techniques which when made available to the general educator will benefit all children. To meet this end, the Bureau of Education for the Handicapped in the United States Office of Education has recently funded a Regional Resource Center at the University of Oregon's Department of Special Education. The specific intent of this center, which serves the same region as the SEIMC, is to work with general and special educators to analyze specific children's learning problems and develop tactics to keep these children functioning in the regular class setting. The

Regional Resource Center is developing criterion-based reference tests using test materials from the child's curriculum in the basic skill areas of mathematics and reading to be used for pinpointing specific learning problems in these two areas. Once the learning problems are identified, a specialized team goes into the child's school to develop an instructional program that will enable the child to stay in the regular learning environment. The emphasis is placed upon training teachers, supervisors, counselors, and aides in the effective utilization of these techniques so that the teacher's overall competency to deal with learning problems is upgraded. The center is also involved in offering the same kinds of training to students and returning teachers as part of the College of Education's experimental curriculum.

These two centers' activities are indicative of many similar activities being carried out on an individual or specialized group basis under the sponsorship of various departments within the College of Education. General education is also changing to fit the notion that handicapped children should not be segregated from their nonhandicapped peers. Somehow, as educators, we must take advantage of this situation, for behind these two directions are substantial bodies of literature, methods, techniques, and services that cannot help but benefit all children.

While the teacher training institutions are in a key position to serve as catalysts in bringing general and special education together, I do not believe they are presently geared to function in this role. The certification requirements for teachers in most states require the special educator to be additionally certified in either elementary or secondary education. Yet certification requirements for general educators seldom require special education instruction beyond the "Introduction to Handi capped Children" course. Likewise, special education administrators seem to avail themselves of more general administration courses than general administrators avail themselves of special education courses. Special educators have learned a great deal about individualizing instruction and amalgamating the necessary administrative/logistic support to deal with specific learning problems. On the other side of the coin, general educators continue to place heavy emphasis on perfecting means of instruction in specific content areas beyond the specialized concentration of educators of the handicapped: reading, mathematics, and social sciences. In short, the pressure of time and our present division of labor preclude general and special educators optimally benefiting from each other's training program. The consequence is clear: special educators are increasingly able to identify more learning problems, and general educators are still having difficulties in dealing with these problems in the regular classroom. The regular classroom teacher wants the handicapped child out of her classroom and into the hands of the specialists. An increasing number of specialists want to work with the handicapped in the context of the mainstream of education.

The teacher training institutions must continue to provide leadership in identifying these and other discontinuities within our training programs. Certainly, we cannot afford to overlook our basic organizational structure which lends itself to isolation and even insulation of the various departments within the college of education. The resulting fragmentation, duplication of effort, and poor communication between specialty areas and departments presently precludes the generalist and the specialist from ever benefiting from each other through common training. The University of Oregon has had some experience in merging specific training functions in both general and special education to minimize the benefits of integrated training while reducing operational and regulatory constraints. Accomplishments to date would include Dr. Hotchkiss' experienced teacher fellowship program designed to provide specialized skills for the teacher returning to campus; Dr. Mattson's and Dr. Brissey's work in training school administrators in various aspects of special education technology; Dr. Haughton's developmental work in the area of precision teaching which enables the teacher to specify a child's rate and magnitude of learning and thus carefully monitor the effects of instruction, materials, and techniques; Dr. Becker's and Engelmann's follow-through project is to develop more of the highly successful *Distar* mathematics and reading programs for children with learning problems; and training students and returning teachers in the utilization of these systems. All of the aforementioned specialized programs are aimed at including the general as well as the special educator in the on-going activities.

With these examples firmly in mind, I do not feel that it is unrealistic to ask all teacher trainers within colleges of education to list competencies they feel a qualified teacher should have and to participate in planning relevant training on a college-wide basis. Ultimately, if public education is going to accomodate itself to an integrated mainstream learning process for the wide range of capabilities, changes must take place throughout the system; changes at the teacher-administrator training level alone are not enough. We must continue our efforts to get the average general educator trained in diagnosis of learning problems, selection and/or design of refined materials and techniques to respond to the educational diagnosis, implementation of the prescriptive program, and evaluation of the results. Once the general educator becomes more skilled in these areas, we must continue to encourage and support him as he accepts additional responsibility for the exceptional child, or any child, on an individual basis. So that changes in the public schools and the training programs might yield some semblance of continuity, let me conclude by dispelling the rumor that "colleges of education do not encourage inputs from practitioners in the field." To what extent this rumor is grounded in fact, I cannot say; I would suspect it depends upon which college of education you have in mind. I can, however, assure you that the College of Education at the University of Oregon is anxious to learn from you ways in which general and special educators might better learn from each other.

THE REINTEGRATION OF TRAINING

Dr. H. Gene Hensley

The Integration of Training

For generations we have been trying to influence the behavior and learning potential of children in the public schools through the professional preparation of their teachers. Few argue that teacher training is unnecessary, but most would raise questions as to what kind, how much, and at what time training is most useful to the teacher and of greatest benefit to the student. Some educators consider the attempts to influence the experiences of handicapped children in special or regular classrooms through training of teachers to be futile. They are not optimistic about the possibility of skills, techniques, and instructional procedures acquired by teachers being translated, interpreted, and applied as appropriate and effective teaching methodology in either formal or informal learning situations. Some feel that the special educators' respect for the individual child, their individual approaches to learning, and their experience in communicating with difficult children are the plus factors that might make a difference in regular classrooms. However, it is at least worth considering that special educators might also possess a body of knowledge, new though it may be, that is important for classroom teachers. It is possible that there are a number of strategies which serve special educators that are based on an appreciation for individual differences and are designed to take into account human frailties.

Variables in Curriculum

There are a number of variables in any curriculum for special or elementary education. Four worth considering are (1) basic skills or content, (2) instructional media, (3) school environment, and (4) the student's behavior.

Many of the children who are the recipients of services offered by special educators do not conform with a well-defined group. They can be hyperactive or withdrawn; affected by single disabilities or groups of disabilities; unusually intelligent or somewhat limited in cognitive development. They will sometimes manifest disorders of visual perception, be uncoordinated in gross or fine motor movements, or show symptoms relating to eye-hand coordination. In recent years, special education has pioneered in methodology and techniques aimed at providing children with the basic skills essential to overcome many specific, and not so specific, forms of learning disabilities. These programs stress listening activities, oral expression, gross and fine motor development, concept building, and the integration of ideas. While such a curriculum is in no way the exclusive domain of special educators, special education is well known for its concern with the development of basic skills as important in overcoming existing or anticipated learning deficits.

Although special education conceived as specialized services for the handicapped is more than 100 years old, the instructional media of special education is relatively new. Until about 1960 most special educators had to rely on their own ingenuity in developing materials. They either made their own or, whenever possible, adapted the materials and technology of regular elementary and secondary education. As the field of learning disabilities blossomed and as special educators began to detach themselves from some of the early categories of disability, there was an effort to define instructional tasks in educational terms and to refine teaching competencies. In short, special education became more education oriented. The variety of instructional media and its availability to classroom teachers increased tenfold within a period of five years. The point I would like to make is this: as special education began to focus on the acquisition of language, the development of basic or preacademic skills, and those educational problems in which general education has traditionally been interested, our technology and our capabilities to effect desirable changes in the learner rapidly expanded. It is possible that our greatest progress in the development of special education occurs whenever we realign ourselves with regular education.

As for the school environment, there is probably little that is unique to special education. The control of classrooms, the importance of class organization, and the structuring of classroom activities have been a major concern to both special and general education for years.

It is in the area of behavior management that special education has pioneered. Many of the behavior modification procedures were first applied in special education settings, e.g., operant conditioning, contingency contracting, and modeling. Further, the applications of principles of learning, so important in individualized instruction, have received significant attention by special educators. Finally, the importance of beginning early in working with difficult instructional problems has been recognized and stressed in most special education strategies for many years.

Getting Started—Reintegration

Getting started in any type of project is sometimes the most difficult aspect of the project. Especially is this true when trying to promote positive change in two systems when there is some resistance from each, as is the case with special and general education.

I am not sure how the reintegration of special and general education might be best accomplished. Perhaps there are a number of different ways in which interdepartmental or interdisciplinary programs might be fostered. However, I feel quite sure that the getting started process typically involves some of the following considerations:

1. Listen and try to learn from each other. Everyone needs to describe the problem, identify the issues, and spell out the objectives as he sees them. The objectives may be strikingly similar for both special and regular education.
2. Familiarize yourself with each other's programs.
3. Ask your preservice and in-service students what they think of the current programs of teacher preparation in special and general education.
4. Reevaluate your objectives and your methods of achieving them. Take a look at your courses, your state's certification practices, the demand for teachers, and the competencies of your recent graduates.
5. Consider giving priority to projects designed to cut across departments, schools, or colleges and note the degree of interest in these programs expressed by students, faculty, and administrators.

What can general education offer special education? Everything. It already has greatly contributed. Special educators have been taking courses in general education for years, using media developed by regular educators, and modifying their techniques and curricula. What can special education offer general education? Plenty. Educational diagnosis, precision teaching, a clinical approach to instruction, and a willingness to work with the toughest of problems are but a few contributions of special education to general education. If elementary and special education programs are to be integrated, we will have to integrate our teacher education programs. Isn't it about time?

A MODEL FOR THE OPERATIONAL IMPLEMENTATION OF EDUCATIONAL RESEARCH AND TRAINING INTO THE CLASSROOM

Alexander L. Britton

As I glance over such an auspicious group (I had planned to say "suspicious" but thought otherwise as so many of you are personal friends whom I'd prefer not to offend), it is quite apparent that many of you could do a superior job as presenters in this symposium. However, as you may be aware, I apparently was the last person to leave the room after the general session this morning. It was then that Gene Hensley prevailed upon me to join the symposium with him and Dr. Lord. Hence, here I am before you as a representative of the college level in teacher training.

Please bear in mind that most of the comments I will make are taken from a number of notes that I hurriedly jotted down during lunch. I would much prefer being able to present a scholarly paper with referenced studies as opposed to an off-the-cuff impromptu presentation. A colleague of mine, who is well known to some of you, is quite capable of rattling off studies and researchers with little or no hesitation or apparent memory searching. Unfortunately, I do not possess that quality. Therefore, as some of my students are aware, I have a favorite duo of researchers to whom I refer when I am at a loss for a reference to substantiate a generalization or concept. Thus, I may refer to Fricke and Peters throughout the afternoon. For those of you unfamiliar with Fricke and Peters; they own a small commercial paper concern in Long Beach. Their names have always sounded so

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authentically academic to me that I have just naturally referred to them when the need arose. They are, of course, unaware of how helpful they have been in the past few years.

Initially, permit me to say that I am very much concerned over the degree of verbal abuse special education has received this morning. It is my belief that the time has come to tend to the problem at hand, that of educating children regardless of the nature of their learning disorder or of the place they may find themselves—high, low, or normal —on the continuum of the learning process. This means that we direct ourselves to the many forms education must take to insure that every child has the opportunity to learn commensurate with his abilities, regardless of the nature of his learning process. The discovery made this morning that special education or general education, for that matter, has failed many children is not a new one. It seems to me, if my memory does not fail, that these problems were raised some time ago, even before Dr. Dunn's article in the CEC journal, *Exceptional Children.* Wasn't it Jim Smith, or was it the late Edgar Doll, who coined the phrase, "hardening of the categories"? As a matter of fact the problem of training or credentialing teachers with relation to categories was questioned back in 1967 at the CEC convention in St. Louis by Fargo, Milazzo, and others when they suggested a generic approach to training with the emphasis upon the commonalities of children with learning problems. Perhaps some of you recall the CCBD resolution at the general assembly of the CEC in Denver two years ago.

Perhaps it is healthy to be critical of oneself when one believes one has erred throughout the years. I would submit, however, that many critics of special education are thinking only of the segregated classroom. I'm not certain that, at the onset, special education was designed to be limited to the special class solely. I needn't remind you, I'm certain, of the many other forms special education has taken. Think for a moment of the number of children speech pathology must have served throughout the years. Remember, the speech therapist uses many different approaches or environments to serve her children. You will undoubtedly recall many other examples where the segregated class is not the norm. The blind, deaf, and others being served by itinerant and resource teachers are but a few examples. This is to say nothing of the many retarded youngsters who may have been helped to remain in school who might have dropped out or been excluded had they not been placed in a special class.

Nevertheless, special education as well as general education must accept some responsibility for many of the problems existing in our schools today. This is especially true in the area of the ethnic, minority, or poverty child as well as with many children with learning disorders in or out of special classes. Perhaps, therefore, criticism and evaluation is healthy. I would, however, submit that such criticism will be truly healthy if it is made in a positive manner with improvement in mind. It thus behooves us as professionals to set upon the task of improvement.

If we place special education with relation to general education in its proper perspective perhaps we can begin to make progress. Erikson might say that special education is in the adolescent stage, struggling through "identity vs. identity diffusion," while general education has reached the mature adult stage and is experiencing the crisis of "integrity vs. disgust and despair"; thus supporting the current soul searching, seeking of self, on the part of special education. Recall that special education may be unaware of its parents. It may even be considered by some to be a bastard. Special education appears to be a progeny of a combination of parents; general education, psychology, and even medicine. So the time may have come for special education to resolve its identity crisis; to find itself and especially to find itself in relation to its parents—general education in particular. The time for overt verbal abuse and attack is over. We must address ourselves to the task at hand.

Initially, permit me to express an extreme bias as it relates to public education. It is my firm belief that the local school building principal must be responsible for the educational whereabouts and program for every school age child in his district. It matters not whether the child is to be served in a residential facility, a special school, a special class, a regular classroom, or by an itinerant teacher or a learning support specialist; the local school administrator should at all times be aware of the child and assume the responsibility for his education. I would submit that the building principal, even as that person changes, should be aware of all the school age and preschool age children within his school's boundaries, especially if he desires to assure a quality educational program based on realistic planning.

As to the nature of the training on a college or university level, I would like to share an idea with which I have been toying for some time. You may wish to throw darts at it and find much fault after I have finished. With some exceptions it appears as though many of the general education methods are still being taught in the same manner as they were years ago. Innovations are undoubtedly occurring. Some activity-oriented exploratory-type students, however, still come into special education offices and indicate that they have been "turned off" by general education methods courses and have heard that special education offers greater opportunity for creativity, innovation, and challenge. This may or may not be true. Perhaps this would be a good study for Fricke and Peters, if they haven't already conducted one. The fact is that the time for change is upon us.

Besides curricular changes to better serve and attract quality students, college training and university research should be directed in such a manner as to guarantee implementation of new and appropriate techniques and concepts into the classroom to insure concomitant benefits to children, regardless of the nature of their learning process, the modality with which they learn, or the setting in which they are served.

As many of you are aware, the problems of faulty communication, time lapse, irrelevance of research, etc., have plagued education and especially special education for some time. Many problems have been created by the competitive scramble for federal and foundation funding. Perhaps it would be desirable to apportion each state into an appropriate number of research, training, and implementation regions. Each region would have at its hub a designated university. After all, it is essential to have esoteric idea people constantly in search of new problems to be researched or in directing higher level academic investigations. Surrounding the university would be a stipulated number of undergraduate and graduate degree level colleges offering education and teacher training programs. Each college, in turn, would serve as the nucleus around which a designated number of school districts (public and private) would cluster. We would then have a universe surrounding each university with constellations made up of local school districts attached to a major star, the teacher training college.

Research, training, and implementation money would be apportioned on ADA basis through a state coordinating committee. Each region or universe would have its own research, training, and implementation committee, as would each constellation or subregion. The committee would consist of members elected to rotating terms of office at each level by their peers in an endeavor to permit as many people as possible to serve throughout the ensuing years. Each local school district and school plant would also have such a committee.

Through continued communication current and future problems could be designated and suggested for research. Results of experimentation would be communicated through the satellite committees to the college training programs and the local school classroom. Relevant studies may be replicated in different regions if desired. Studies specifically indigenous to a given region or cluster could be facilitated with the elimination of competition from areas where the study may not prove to be relevant.

With this organizational plan perhaps exploratory laboratory research conducted on the university level could be replicated by cooperating college and local school district personnel. Hence, it may be conducted directly in the local classroom with the teacher having been involved in the decision to engage in the research. Local district personnel would have the opportunity to participate in decisions related to training programs and could become an integral part of the teacher training team. They would have the opportunity to become research and training oriented, to participate, to receive instant feedback, and to be involved in implementation. Perhaps renewed interest in principles, concepts, and theories of education would develop on the local school and college training level. Greater cooperation and mutual respect may result between the university researcher, the college teacher trainer, and the classroom teacher. The status of the classroom teacher may be enhanced as she becomes a participating member of the research, training, and implementation committee, thereby facilitating implementation of educational research into the classroom. In the last analysis it is the classroom teacher who directly serves the children regardless of whether they be in a regular class or are being served in some other class or program.

As the various levels of personnel interact, a priority list of problems for thesis or dissertation level candidates may result. Populations will be readily available to the graduate student. The local school may then become the laboratory for education research and training to a much greater degree than it is today.

Although such a regional research, training, and implementation plan may have many problems, it may prove beneficial if refined. It is conceivable that regional board members would discover the need to plan. We might finally begin to work on a master plan for education that would include higher education, teacher training, and special education similar to that which Bob Fuchigami has been calling for these past few years. Such a plan may also prove to be financially sound and economically feasible. Thus we may find educational research and training implemented successfully in a mutually cooperative manner between professional personnel on all levels throughout the state.

SYMPOSIUM: STRATEGIES, MODELS, AND IDEAS FOR ACTION IN WESTERN COLLEGES AND UNIVERSITIES

Dr. Leo F. Cain

In considering the problem of contiguity and continuity in general and special education, a number of issues need to be discussed.

1. *New focus on the role of the teacher.* For too long, teachers in the typical special education program have been separated from teachers in the general education program. If we are to achieve continuity in special education and general education, both special education teachers and general classroom teachers must have a better perspective and understanding of the total school setting in which both operate. Teachers must focus on who is being taught—not only on what is being taught. The special education teacher must think of more than just working with the retarded, and the fifth-grade teacher must think of more than working with the ten-year-old who sits in her classroom. Teachers must be concerned with innovation in the curriculum and this concern must go beyond the discussion stage.

2. *The categorical nature of our educational programs needs immediate reexamination.* Special education has been accused of being categorical in its approach, but we need to recognize that all education is categorical. We talk about helping the disadvantaged and the poor. We talk about urban children as a category and rural children as a category. We assign classes to children by grades. Our system of grade levels demands categorical achievement within that prescribed grade level.

Special education has used a medical model in the development of its program. This model defines children according to disability categories and prescribes programs in relation to these categories. The result has been that perhaps more categories than necessary have been created in order to provide for children who do not fit into previously established categories.

Special education needs to redirect its efforts toward the learning problems of handicapped children and broaden its base of operation. The current teacher credentialing system simply reinforces the categorical approach because credentials demand categorical training. The base should be broadened to give all teachers a more realistic approach toward learning and adjustment problems of children.

3. *The role of the college and university should be intensified.* The college and university still provide the base training for professional staff in education. In providing this training, institutions of

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higher education need to broaden the perspective of the so-called regular teacher. Included in their training should be some study of the handicapped child. This cannot be done simply by requiring a course in exceptional children. Colleges of education need to extend the base of training for all who wish to enter the field of education. This broad base can help the prospective teacher understand the key role education plays. The base should be truly multidisciplinary and, in addition to education, include direct contacts with such fields as psychology, sociology, economics, health, and political science.

The prospective teacher should also be introduced to strategies designed to create the best learning environments possible. These environments should include approaches to the widest variety of individual differences possible. Such approaches could reduce the need for special classes and services but would not eliminate them. In creating these strategies both special education and general education teachers should be given realistic experiences related to such key areas as early childhood education; the role of the environment on education, particularly the impact of the ghettos, barrios, and suburbs; the effectiveness of screeening and testing children for educational placement; and the responsibility of the teacher for being accountable for the results of her efforts.

In conclusion, I should like to indicate the necessity for continuous review of the legislation that establishes special education programs in most of our states. Current legislation in many states perpetuates the categorical approach in special education. As new programs emerge and as new strategies are developed, legislation should be changed. If existing legislation prohibits experimentation and innovation, we must have legislative change, but at the same time we must insure that adequate financial support for the education program exists. Simply eliminating legislation for special education programs is not the answer. Constructive new legislation must be enacted that will insure that the needs of all children in all schools are properly met.

Dr. John Ogden

The responsibility for training teachers and other personnel typically has been relegated to the teacher training institutions. Local education agencies have provided the facilities for practicums, the state education agencies have issued certificates, but the actual instruction has been left to the college itself. There is a growing concern that this approach is not adequate. The responsibility for teacher training must be an equal responsibility of all three agencies; the local education agency, the state education agency, and the teacher training institution.

Furthermore, the training of teaching personnel must be approached on a statewide basis, utilizing management-by-objective techniques. Concern must be given for all parts of the state—rural and urban, sparsely populated and densely populated. Concern must be given for particular needs; i.e., speech correctionists, teachers of the mentally handicapped, or teachers of the deaf. We cannot allow for such paradoxes as we find with speech correctionists: an oversupply in the urban areas to the point that many cannot gain employment as speech correctionists; a demand in the rural areas for speech correctionists and none can be found.

We must accept the fact that in rural areas the manpower needs will be met primarily by retraining. Whenever retraining is taking place, the training, or at least part of it, must be taken to the teachers. We cannot expect those with families to part from their families for extended periods of time. We must also consider the advantages of taking the training to the teacher, the primary one of which is the utilization of local handicapped children in the process of training the teachers.

There are many questions that must be answered in the pursuit of training teachers by meeting agreed upon objectives. Let us look at some of these questions:

1. Train how many teachers of the mentally handicapped? For where?
2. Train how many teachers of the visually handicapped? For where?
3. How many of the teachers that we have trained have stayed on as teachers?
4. What characteristics predict attrition?
5. What characteristics predict continuing in the profession?
6. Where must we take the training to the teacher?
7. Under what circumstances do we take the training to the teacher?
8. What resources are needed and/or available for training? Library? Teaching materials? Personnel (local and state expertise)? Media (conference telephone, closed circuit TV, video tapes, amplified telephone)?

In the training of teachers we must learn to accept the fact that adults as well as children exhibit individual differences. We in education, especially in special education, have been expounding for years the need to take each child from where he is and let him progress at his own rate. Yet somehow we expect all adults in a teacher training program to take the same courses, to progress at the same rate, and to turn out equally competent at the end. I am suggesting that we alter this course and train for competencies. It really wouldn't be too difficult for us to sit down together and decide just what competencies are needed by a teacher to deal effectively with handicapped children. Wouldn't there be a common core of competencies needed by each person before he could be called a teacher? Such competencies might include the ability to teach reading and mathematics and to modify behavior of children. And wouldn't or couldn't we expect some teachers to obtain additional competencies, such as the teaching of Braille, the teaching of reading to children with auditory perception losses, planning and utilizing of special curriculum for the educable mentally handicapped, and/or diagnosing learning problems?

To determine when a teacher has reached a competency, we could expect him to demonstrate so by passing a test on specific content, giving a narrative explanation of the utilization of content, and by actually performing. A teacher could ask to be tested for a competency at any time. Then school districts could employ teachers who possessed those competencies needed in their programs. Teachers would perform only those duties for which they had competency.

Laurance B. Carlson

Excellence in education depends largely upon an understanding and acceptance of all children and their individual differences. The success of an educational system can be judged on the basis of the extent to which it meets the needs of all children.

Americans in general have long held that, ideally, all children should be afforded the optimum educational opportunity. Despite this ideal, many children over the years have been disenfranchised. Increasing concern for the needs of individual children has resulted in the development of special education services. Usually these services were provided on demand with little prior planning. Consequently, the structure of services, the type of services to be provided, financing of such services, and staffing patterns varied widely from state to state and district to district. Obviously, this haphazard approach left wide cracks through which many children fell. Willenberg (1) noted that in 1963 enrollment in special programs of all types totaled almost 1.7 million pupils, and he estimated that 6 million needed services.

In recent years much attention has been given to grouping exceptional children in terms of their common educational problems rather than their diagnostic classification. Sorting children in terms of learning problems makes good sense instructionally. It is obvious that children with different diagnostic labels frequently have similar learning problems. Traditionally, services have been rendered through the media of residential programs, hospitals, homebound instruction, day-school instruction, special class schools, special classes in resource room instruction, itinerant teachers, and consultive services; but, as I mentioned earlier, children are still falling through the many cracks in our traditional program and this is especially true in rural, isolated, low-tax-based districts where it is not feasible to establish traditional services for handicapped children because of sparsity of population, rugged topography, inadequate highway systems, and inadequacy of financial resources.

One of the purposes of this conference is to present alternative solutions to problems of implementing quality programs for exceptional children. If we are going to fill in the cracks, we are going to have to make some changes in the services we have been offering in special education; and when we mention change the most often heard remark in opposition to basic changes in special education is something to the effect that "you are trying to destroy the old system and you do not have anything adequate with which to replace it." Dr. Lilly points out in CANHC-GRAM that this is no longer a valid argument. He lists a number of models, developed in recent years, which are not self-contained classroom approaches to special education. One such model was developed at the University of Idaho.

Those of us at the University of Idaho found that we were unable to apply even a close proximity to any of the traditional models that had been proposed to deal with the exceptional child. Even the flexible resource room seemed inadequate to deal with this problem of sparse population, isolation, and low finances. When we looked around at the particular needs of our rural school districts and at the training facilities we had available, we proposed a training program that we felt would attempt to meet the academic and social needs of the exceptional child residing in any one of these districts. The philosophy behind this program was that a child's educational opportunities should not be denied him because of his being born in a rural isolated area any more than his educational opportunities should be denied him because of his being born in an urban ghetto area.

Let me give you again a very brief description of our area. More than half of the school children in the state of Idaho reside in school districts with a total pupil population of less than 200. The economy is marginal agrarian, lumbering, and/or mining. Idaho's per capita income is growing at a substantially slower rate than the national average. Surveys by community action agencies indicate that from 20 to 25 percent of the state's population falls within OEO guidelines with regard to poverty. Few of the districts in these rural areas provide any special services to handicapped children. There are 433 school districts in the state of Idaho. Only 48 provide any kind of special services for the handicapped child. Reasons for these gaps in services are in part due to limited financial resources to support special programs. An even more debilitating reason for lack of services is the inability of these areas to attract professionals. There are school districts which have offered to pay salaries competitive with the highest paying districts and still they are unable to attract professionals to teach the handicapped.

Handicapped children are sitting in regular classrooms instructed by teachers, few of whom have any special training, who are using materials inappropriate to the needs of the children. Also, the remoteness of Idaho truly limits the contact of handicapped children with the outside world; therefore, children in such schools are handicapped, not only by deficits in the interface between modalities and functions, but also by inadequate stimulation which would facilitate acquisition of appropriate learning behavior repertoires. Handicapped children in remote areas tend to exhibit dysfunction in receptive and expressive modes in primitive reinforcement systems; they suffer from the debilitating effects of environmental deprivation.

If this contingency system is to be controlled, the point of intervention has to be through the retraining of regular classroom teachers to meet the needs of handicapped children. It is from this concept that we proposed a model which we call Behaviorally Engineered Classroom for Rural Areas or BECRA. The model was designed to meet the academic and social needs of exceptional children within the framework of the regular classroom. It accorded high priority to retraining regular classroom teachers to meet the needs of the exceptional children found in their regular classrooms.

The project objectives were as follows:

1. To train a nucleus of regular elementary classroom teachers capable of meeting the academic and social needs of handicapped children within the regular classroom.
2. To provide a group of trained teachers to serve as resource personnel for other classroom teachers, particularly with respect to behavioral engineering, curriculum modification, and selection of materials.
3. To provide training and experience in the use of classroom management techniques enhanced by greater technical competency on the part of the teacher, which will increase observable learning behaviors of both normal and handicapped children.
4. To demonstrate the efficacy of a new model for training regular and special classroom teachers.
5. To promote a modification of the special education teacher training programs to include behavioral engineering, curriculum modification for handicapped children, and management of learning contingencies.
6. To encourage the State Director of Special Education to reexamine some of the assumptions underlying existing regulations for reimbursement of services to handicapped children.
7. To demonstrate an approach whereby school districts in remote and sparsely populated areas may meet the needs of many handicapped children within the framework of a regular classroom through the services of a specially trained teacher.

The substantive content included the following:

1. Development of an overview and understanding of exceptional children.
2. Development of assessment and remediation techniques pertinent to establishing individualized instruction.
3. Development of a working knowledge of the three major classroom behavior management techniques: prescriptive teaching, engineered classroom, and precision teaching.
4. Development of knowledge and skills in areas of curriculum and in selection and utilization of relevant materials.

The unique features of this project were as follows:

1. To train experienced classroom teachers who were committed to living in rural isolated communities.
2. To provide the local educational agencies with trained substitutes to allow regular teachers to be absent from the district for half of the academic year.

To accomplish this training model we decided to utilize a two-phase program. The first phase would involve training inexperienced teachers during the first semester, and this training would include an emphasis on the substantive content which I mentioned previously, as well as integrating them into several of the special education courses currently being offered at the University of Idaho. Upon completion of this phase, these inexperienced teachers would go to the local school districts and replace the experienced teachers currently employed by the LEA. Then we would implement the second phase which would bring the experienced teachers to the University campus second semester. They would receive essentially the same training that was given to the first semester's group. Then this was combined with a summer program which brought both groups back to the campus as the culminating semester.

The makeup of the two groups: The first group were, as I indicated, inexperienced teachers; they were B.A. level individuals who had received their training in elementary education, not special education. All of these teachers had received a degree in elementary education but had not yet taught in public schools. The second group were regular elementary teachers who had been teaching for a number of years. The mean age of our inexperienced teachers was 23; the mean age of our experienced teachers was 47. Teaching experience of the second group ranged from 17 to 7 years.

The first semester program: Participants worked with children from 8 a.m. to noon. They were engaged in a seminar from 1 to 3 p.m. Monday through Friday. Then they attended evening classes from 7 to 10 p.m. on Monday, Tuesday, and Wednesday. An engineered classroom was utilized as the nucleus for the training model. The participants worked as aides in the engineered classrooms in the Moscow school district and in a preschool class located on campus.

The second semester program: The timetable for phase two was basically the same as first semester; practicum and seminars during the day, the majority of the coursework during the evenings. In phase two we had direct supervision of the inexperienced teachers who were out in the field by two experienced special education teachers who were enrolled in the doctoral program.

Looking back at this project and its objectives (which are listed above), the University staff felt that the program successfully met the first three objectives and that it partially met objectives four and five.

The teachers and the districts reported favorable impressions about the project. All of the districts that participated in the program have utilized their BECRA-trained teacher as a resource person to describe the concepts to other teachers in the district. The BECRA teachers are continuing to employ in their classrooms some of the techniques that were utilized in their training program. As you know, this has always been a concern of training projects—once a new technique has been learned and competencies gained in the area, how to get teachers to carry it over into their classroom a year after the training has ceased.

To date we have visited four of the five experienced teachers in the program; all four are using some forms of the training and have made an attempt to individualize a program for the exceptional children within their regular class setting. One of the things we had to caution administrators about was for them not to dump all of the exceptional children in that district in this teacher's classroom.

Two features effectively demonstrated by this program were (1) the importance of practicum as a model for teacher training, and (2) that constant supervision of teachers is an essential factor for success of a carryover type of program. We were able to point out by this model that teachers who were systematically and frequently supervised utilized more of the training techniques in their classrooms than those who were supervised on an unscheduled basis.

This program did several things for our area:

1. It presented a new model of teacher training at the University of Idaho's College of Education.
2. It demonstrated the possibility of individualizing instruction in regular classrooms.
3. It demonstrated the feasibility of serving some exceptional children in a regular classroom.
4. It increased communication with local educational agencies and the University of Idaho.

Obviously this project was only a small part of an initial step in developing contiguity and continuity in general and special education.

It is my belief that if we are to meet the needs of the exceptional child residing in rural areas, we must recruit and train individuals who are committed to living in these isolated communities, and we must develop models that will meet the academic and social needs of these exceptional pupils who are dispersed so widely that it is impractical to educate them via the traditional special education models.

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Dr. Anne W. Carroll

The question of the role of special education and general education has been one of ongoing concern to both fields for many years. However, the changing scene in general education will certainly have an effect upon us in special education.

A brief summary on the differences between the present and new systems in general education might be as follows:

Present System	*New System*
Screen for college	Educate all students
Transmit knowledge to passive students	Involve students in active learning
Learning in groups following preplanned sequence	Individual personal plan
Truth known	Knowledge as process and inquiry
Direction and limits known	Search for meaning
Training in three-r's	Three-r's plus social and career skills, sensitivity, independence, action, talent
Credential teacher only	Various agents including students
Teacher-directed	Involve community and students in decision-making
Student is responsible for failure	System accepts responsibility for failure
Education in the classroom only	The total community is the classroom
New programs added on	All programs are one
Five hours a day; 180 days a year	All day, all year
Diploma completed education	Education as a life-long activity
Education for children	Education for all people
Closed loop, static system	Self-regenerating, dynamic, changing system
System separate from other community services	System integrated with all community services
Separate school buildings	Education space part of community facilities
Rigid "egg-crate" school buildings	Facilities convertible, flexible, multiuse

Some questions we as special educators might ask ourselves follow:

1. What are the needs of regular education (classroom management, classroom understanding, learning styles, skills in communication and decision-making, understanding self and ability to talk with children)?
2. What competencies do we who function under the rubric of special education have to offer? (Certainly the individual competencies will vary.)

3. How do we begin to mesh the above?
4. Is it possible to include a percent of time, no matter what our work environment, to plan and develop strategies for programming with regular educators?
5. Is it possible to commit ourselves to this idea to the point of exploring models of intervention into the system as it is now constituted?
6. Is it possible to reorder our thinking in terms of different models for the delivery of service to exceptional children and to include regular educators?
7. What are some strategies currently available?
    - I. Preservice
        - a. Integrational or separational planning in schools of education
        - b. Variety of intra- and interdepartmental planning—courses and experiences
        - c. Early entry into the field, coordinated seminars (guided experience), student profile of experiences moving from lock step curriculum to recognition of individual differences
        - d. Competency measures and evaluation
        - e. Input from students—graduates and consumers, State Departments of Education
        - f. Dedication to the components of prevention and modification (change agents—demonstration teaching)
        - g. Course work for regular teachers in management of the special child in the classroom
    - II. Continuing Education
        - a. Planning teams: principal, superintendent, teacher
        - b. Joint workshops with SDOE and training institution and commitment from the district (linkage programs)
        - c. Development of schools in rural areas
        - d. Varied techniques in the classroom
            - (1) Utilize avenues of success for child
            - (2) Precision teaching
            - (3) Match learning and teaching
    - III. General

      Accreditation based upon competencies in conjunction with behavioral objectives to be developed by the local districts and to include both the affective/cognitive domains
8. Would it be possible to exchange what is happening in the WICHE region concerning this problem?
9. What difference has this conference made? Suggest follow-up through pilot project for regular classroom teachers.

Looking to the future, we see that the analyses of learners' needs are the prerequisite to developing and applying strategies for up-grading academic achievement. Real understanding of the child with learning disabilities, his specific kinds of deficiencies, and the distances between self-expectations and school tasks is essential. The particular teaching strategies and methods which will reach this child are probably not strikingly different from those normally used; only their application differs. Sometimes they are developmental strategies; other times, remedial programs. To a large extent, they are continual strivings toward understanding and improving know-how for individualizing instruction and for working with numbers of learners with a wide range of abilities, attainments, and aspirations in such a way that each is reached at his own level. As John F. Kennedy once said, "Although children may be the victims of fate, they will not be the victims of our neglect."

In summary, schools must develop general education which nurtures individual potential in a population where it has incubated for generations. As a Swiss educator said in 1802, (1) "To instruct men is nothing more than to help human nature to develop in its own way, and the art of instruction depends primarily on harmonizing our messages and the demands we make upon the child with his powers at the moment." Let us not be like the practical man Disraeli described as "one who repeats the errors of his forefathers."

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Dr. Marvin G. Fifield

Repeatedly, the professional literature refers to a crisis in education. Possibly more exacting, we could indicate many crises on many different fronts. One significant dimension of the crisis in education is increased concern for teacher accountability. One need only review recent issues of several professional journals to determine a concern, national and local, for teacher accountability (*PDK Journal*, December 1970).

The concept of accountability applies to all education, special education and general education as well. Particular concern will be focused on special education, for much has been given, and much will be expected:

1. *Funding*. Per capita, a significant amount of money has been earmarked for special education. This has permitted flexibility and an opportunity to try many new and different ways of doing things.

2. *Structure*. Classroom structures, groupings, materials, curriculum approaches, etc., have been easy to instigate. Many of the boundaries and conditions imposed upon the general education programs are not imposed on special education.

3. *Expectations*. Students, teachers, and/or parent expectations have been less solidified. Special education teachers are not bound by K-12 curriculums which preset and force them to a determined rate of academic accomplishments. Individualization opportunities are

afforded, and there has been little consumer pressure for increased standards.

4. *Support Services*. Special education has had available a phenomenal number of support services; i.e., SEIMC's, speech therapy, medical evaluations, psychological evaluations, counseling, and input from many other disciplines. These services are virtually not available for general education programs.

Even with these advantages, as Dr. Lilly's (1) articles emphasize, we are not doing particularly well. The failures in the regular education programs are also the failures in special education. Furthermore, there is little evidence that special education is doing a significantly better job in educating handicapped children than the regular education program.

In reviewing the literature on accountability in education, one is struck by the fact that accountability is discussed primarily in terms of subject matter or learning skills. The only mention of accountability in terms of social issues, creativity, curriculum for living, self-actualization, etc., is from the members of our own profession. It would appear that the public (consumers) are holding education accountable essentially for subject matter and learning skills, and not accountable for total personality development.

Synonymous with accountability is competency. I believe that teaching competencies can be taught, they can be developed, and they can be demonstrated. Increased concern for techniques in determining teacher competencies other than credit hours and courses taken in universities are being discussed in many circles. In Utah the State Board of Education has moved rapidly into a concept of competency. In the near future, all teacher certification programs will be set up on a competency-based criterion.

This is an area where much has been done in general education, and little has been done in special education. A major interface between general education and special education comes in the identification and demonstration of these specific teaching competencies. I believe that teaching competencies for a special educator are essentially the same as for general education teachers. Special education has much to learn from the innovative programs that have been initiated and are being developed in general teacher training programs throughout the northwest.

We might mention a few of these as examples:

1. The microteaching program initiated at Stanford University and further developed by the Far West Regional Educational Laboratory under the direction of Walter Borg is an attempt to identify

specific teaching competencies, present the knowledge and skills in replicable forms through videotaping, and then ask the trainee to demonstrate these in his own classroom. Several of these units have been prepared and are under evaluation and study.

2. The Comfield model developed at Teaching Research, a division of the Oregon State System of Higher Education at Monmouth, Oregon, is an outstanding example of competency-based teacher training programs.

3. Certainly mention should be made of programs such as the Engelmann-Bereiter approach to teaching and the opportunities it affords through specific objectives to demonstrate specific teaching competencies. Many other programs are in development. Few if any of these are coming out of special education.

The demonstration of teacher competency can be at at least three levels:

1. *Knowledge Level.* Does the teacher candidate know the information, can he identify appropriate competencies, and does he have a knowledge of the subject matter of a specific competency?

2. *Skill Level.* This is primarily a process of demonstrating, possibly in a simulated-type setting, a specific teaching competency.

3. *Product Level.* Does the competency make a difference with children? The aforementioned examples of programs for teaching competencies are primarily at the knowledge and skill levels. Little data has been produced at the product level. When it can be demonstrated that a specific skill does make a specific difference in the performance of children, we will have met the accountability criteria.

Several years ago, a project was attempted at Idaho State University where teachers in training were given the task of training a rat to run through a maze. Each teacher candidate was given a rat and asked to define what the task was (objective) and program how he would train the rat to perform the task (process). To some extent, this same approach has been employed at Utah State University in the psychology department. These experiments have shown many things:

1. There is a wide variety of methods used in training a rat to perform a specific task. Some teachers use strict behavior modification; others use coaxing, guiding, and bribery; others use patterning.
2. There is wide individual difference in rats. Some respond to certain techniques; others seem to respond better to other techniques.
3. There is an even wider individual difference in the ability of teachers to train the rats to perform the task. Teacher candidates repeatedly indicated that they had retarded rats; yet when the same rat was given to another teacher, it was able to perform the task readily.

Possibly an additional finding in this study was the need for tender, loving care. The teacher candidates that developed an interest in the task and would caress and coddle the rats seemed to have significantly more success than those that approached the task and the rat with cold objectivity.

These projects have demonstrated that competencies can be simulated in simple exercises. From the limited data available, they suggest that the specific teaching skill simulated with rats will have a carryover in working, programming, sequencing, and evaluating teaching success with children.

In the Department of Special Education at Utah State University, we have attempted to incorporate some of the same principles in our field experience. In this situation each student is required to take a field experience in his sophomore year. The candidate first identifies a child, identifies a specific task that he wants to teach this child, finds the criteria for determining when the task is taught, and develops and presents a learning sequence. Each teacher candidate is given three credit hours and is required to complete the task under the supervision and evaluation of a faculty member.

One of the most important factors that we have found thus far is that a teacher candidate has to *teach* the child, not simply counsel or guide him. There is a significant difference between teaching and counseling. Although teaching may involve counseling and guiding youngsters, in dealing with handicapped youngsters, the demands for teaching a program or sequencing it are substantial. We have a large number of doctorate candidates who do not want to teach but want to counsel and guide. Once again, it would appear that we, as educators, will be more accountable for our teaching skills than our guidance and counseling skills.

The interface between general and special education must come at both the preservice and in-service levels. It is easy to put children into special education classes; it is difficult to maintain them in a regular program. Classroom teachers seem to expect relief from a problem child and are not seeking consultation as to how they can better handle the problem. Special education teachers often have negative feelings toward the regular program and feel that the exceptional child returning to the regular program will experience failure, ridicule, and rebuke from his teacher. Most teachers, special and general, do not see their roles as programmers of learning. They do not feel competent in employing a wide variety of resources, i.e., aides, volunteers, other professionals, materials, etc., to solve a problem. To adequately effect this interface, training programs must change and the

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role of the teacher be more precisely defined as a facilitator of learning through programming and individualization. Teachers must learn to work in teams; teaming up (i.e., the teacher working as a team member with speech therapists, psychologists, physicians, neurologists, social workers, etc.) and teaming down (i.e., the teacher serving as a team leader working with aides, student teachers, volunteers, peer volunteers, etc.). Returning an exceptional child to regular classrooms, even with the provision of a great deal of resources, has little positive effect unless the regular teacher has expertise and competencies working with aides, is sensitive to a wide variability in learning, and has access to appropriate materials for individualization.

An EPDA project was initiated two years ago at Utah State University designed precisely to meet these factors. A master teacher and an accompanying aide were selected from participating rural districts in Utah and brought on campus to serve in a training team in the laboratory school. Children in the special education classes of the laboratory school were dispersed chronologically throughout the school. Thus, the exceptional child in the regular classroom was affected.

The faculty in special education and elementary education at Utah State University have been closely involved in the program in an effort to bring the knowledge and techniques developed back to the regular training programs. One of the more significant outcomes of this project has been the opportunity for teaming up and teaming down and the necessity of teams to individualize and personalize the learning process for both handicapped children and other children in the classrooms. Returning exceptional children to a regular classroom, even with expanded resources, is not a simple thing to accomplish. Many attitudes, convictions, values, and procedures need to be changed both in special education and general education. Our EPDA project has highlighted many of these factors and is now developing appropriate ways of handling them. Returning exceptional children to regular classrooms will necessitate the dispersement of the support services generally identified and clustered around special education self-contained units. This will include materials, aides, volunteers, peer group tutoring, management, special facilities, equipment, etc. Although special educators speak favorably of returning children to the regular classroom, as these services and this support are transferred with the child, territorial concerns do arise. Differences in philosophies, individual and group techniques, community and parental relationships take on new meanings. These problems have emerged in the EPDA project and are in various stages of resolution. If we are to expand the interface between general and special education, special education must be ready to give both time and resources. The advantages that have been obtained over a long history of legal pressure, campaigning, political action and public awareness must now be focused not on established areas or territories but on the individual child.

The interface between general education and special education is essentially through the process of individualization. Much is made of this term, but we often see little of it put into practice. In almost every education course the virtues of individualization and the need for teachers to individualize are heralded repeatedly. Seldom do we see the university or the courses taught in the college of education being presented on an individual basis.

A major exception to this has been initiated this year at Weber State College in Ogden. The entire College of Education has broken down education classes into individualized kits which they refer to as the Weber Individualized Instructional Kits. Each kit specifies behavioral objectives, pretests and posttests, and the courses of instruction. This course of instruction may involve tapes, handouts, assignments to lectures, seminars, observations, and demonstrations. The faculty spends their time primarily in further development of the kits and counseling and meeting with students in their seminar groups. This is a notable attempt at individualization in teacher training programs. This approach also makes the teacher training process replicable and examinable.

Individualization is a competency that can be taught, that can be broken down into specific skills. Each of these skills can be taught at the knowledge level, simulated at the skill level, and evaluated at the product level. Some of these specific skills of individualization follow:

1. *Diagnosis*: Diagnosis implies the identification or pinpointing of what skill or content the child possesses. The teacher must identify what the child can do, not just what he cannot do. Diagnosis may be either formal (standardized tests) or informal (teacher-made tests). It may utilize grade levels or success in assigned course work. If diagnosis is to be meaningful, it must be done by the teacher working with the child and cannot be given to an outside psychologist. Many informal tests lend themselves to educational diagnosis. Other tests will have to be constructed and developed from the curriculum or the subject matter in the basal tests or other material available to the teacher. Diagnosis implies the application of knowledge of a learning sequence in any given subject and how one skill accumulates to the other. It calls upon the ability to observe and to recognize success and failure, accomplishments, or confusion. The artifacts of individualized diagnosis are tables, profiles, charts, etc. These depict the individual

student's placement in any given skill or content area. Familiarity with these tools, with the process of diagnosis, can be taught both on an informational level and on a simulated skill level. Specific problems could be presented to teacher candidates who would be asked to demonstrate the ability to diagnose and pinpoint what a child can or cannot do in a given subject area.

2. *Prescribing*: This term is synonymous with assignments and instruction. For the most part, teachers are rather accomplished in this skill and given a specific diagnosis can generally identify instructional materials, i.e., cassette tapes, programmed workbooks, programmed texts, etc., that lend themselves to individualized instruction. Programming also requires that the teacher employ her knowledge of scheduling the subject and sequencing it into the various steps of the learning task. Individualization requires utilization of assignment books prepared before classes and a specific application of daily lesson plans, broken down in precise detail.

3. *Monitoring*: Monitoring requires the teacher to evaluate achievement, to identify correct or incorrect responses, and employ this information in terms of future assignments. In an individualized instruction program, one would see a variety of charts, tables, record forms, and graphs employed to indicate student achievement and placement in the learning sequence. Without these visual and graphic aids, it is virtually impossible for a teacher to monitor the individual achievement of several children in different subjects. This skill, again, can be demonstrated through knowledge and simulation, and can be evaluated in terms of its product level with children during the learning process.

4. *Reinforcing*: Given the knowledge of what is and what is not an appropriate response, a teacher must be able to employ reinforcement or payoff techniques. This, of course, presupposes that the teacher knows what is and what is not an appropriate response, and then establishes a plan for cueing, reinforcing, or paying off desired or appropriate responses. Specific skills of reinforcement may involve behavior management, behavior modification, cueing, and other reinforcement techniques.

It is, of course, recognized that these components of individualization do not stand alone; they are interrelated. Each skill is dependent upon success in the other area. However, I believe that specific competencies in these skill areas can be pinpointed, taught, simulated, and evaluated.

It has been said repeatedly that special educators have specific skills and competencies that regular teachers need. By the same token, it is obvious that general education has made inroads into areas, processes, and procedures about which special education has much to learn. Specific teacher competencies for general educators and special educators are very likely the same. What makes special education special may not be the specific skills, strategies, or techniques used, but the boundary conditions in which they are practiced.

Reference

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Dr. John P. Mattson

During the time allotted to me today, I would like to discuss several aspects of the referral and placement procedures followed in programming for the handicapped, the problems faced by regular and special class teachers in carrying out an effective and efficient instructional program, and finally some thoughts on how teachers might be trained in order to best meet their responsibilities as education program managers. Prior to making any statements as to how the special teacher might most effectively and efficiently attend to ameliorating those handicapping conditions brought to her by her youngsters and what techniques, procedures, materials, or instructional options she might utilize in this effort, I feel it is necessary to clearly identify the mission of special education. The mission statement most simply put might be that "children are provided special educational aid when this aid is a necessary adjunct to a general education program and when this aid is critical in the development of the child in terms of optimal performance in verbal, social, sensory motor, and academic performance." With this mission statement in mind, we may ask the question, why are children placed in special education; that is, why are they placed in programs made up primarily of children who deviate so from the norm of performance in the areas mentioned as to be clearly visible in the context of the regular classroom situation?

Evidence indicates that when a typical teacher observes that a child is not progressing through the instructional program developed and maintained for a typical child, she behaves in a given manner. When this program requires a certain level of performance, specifies restrictive and often unrealistic instructional objectives, and also requires that a given level of competency in terms of entering behavior be attained before the child may engage in the subject or activity again, a handicapped child is guaranteed failure. The teacher usually adapts her classroom behavior to allow this child to proceed through a series of instructional options intended, though not always designed, to bring the child to the point where he is no longer evident as being different from the rest of the children in the class. If a child really has a deficiency and the efforts of the teacher are in effect to simply increase through drill and practice the behaviors which the child has already failed to attain, or adapt the instructional program to a lower level without attending to deficiencies in the child's entering performance, there is seldom any significant gain seen. The frustration and the guilt of the teacher combined with the continued failure of the child clearly indicate the need for more drastic intervention. One should note that the teacher and the child quite often have an exceptional tolerance level and so the situation may continue to exist well into the intermediate grades.

The response to this problem by the teacher is often one of going to some outside authority. The child is referred to a school psychologist, is tested, and the evidence usually supports the fact that mental retardation, minimal brain damage, dyslexia, or emotional disturbance from some sensory deficiency exists which answers the question of why is the child not performing adequately. The teacher's anger and frustration may turn to compassion, her guilt is resolved in the mystique of labeling the child as being something other than poorly taught, and the child is placed in special education. The parent is assured that this placement is in the best interest of the child because it will (1) allow for individualized programs, (2) give the child more of the teacher's time (as though teacher's time is the answer), (3) reduce the anxiety and frustration of the child, and (4) work toward getting the child "back in the mainstream" (an analogy which must be drawn from the educator examining the spring run of salmon).

A temporary placement is cast in stone, and the instructional program is generated from the battery of inferential tests, including a careful evaluation of a subtest profile, and the child begins his years in a class which is no more individualized than the one from which he came. He often doesn't get back into the mainstream until the school district runs out of special education classes or he simply stops showing up in school.

What is to be done? What must the teacher be in order to eliminate this terrible waste of time and potential? I believe the answer lies in breaking down all those constraints that perpetuate the system as it exists now; and this must be done by an enlightened consortium of teachers, administrators, teacher trainers, and involved community. The teacher must become a program manager with all the skills and responsibilities that go to make up good management. Children need to be viewed in terms of their actual behavioral deficiencies rather than a psychomedical model based on inferential data from unreliable instruments. Standards and guidelines must be developed to insure that the child has as much going for him in getting out of special education as there was to get him into special education.

The classroom teacher is the administrator of a program. She must do whatever is needed to get the job done. In order to do this, she has two options. First, she can be an operator. She can get the job done by doing it herself; in effect she does the delegatable. If the job to be done is to improve child performance, the fallacy of the operating teacher is clear. She can't perform for the child, she can't behave for the child, all she can do is function as a technician and compound the problem. She has another option, however, in doing whatever is necessary to get the job done. She can get improved results by managing the program; by providing specialized leadership to the planning, organization, and control of her program. In effect she can be a program manager.

Let me briefly review the three functions of management and then discuss the essence of good management—delegation.

The teacher must preestablish a course of action in writing. She must identify the assumptions made about future conditions; she must pinpoint the behavior or performance in which she wants improved results. Then she must be able to write out her objectives or end results; the expected standards of performance based on the forecast and objectives. She must develop strategic and tactical steps for achieving the objectives, and she must be able to schedule the starting and completion times for each program. She must also realize the resources available for accomplishing the objective of each step of the program. Finally, her objectives must be consistent with the existing policy and procedures of her district. Her objectives must meet these basic criteria: they must tell what is to be achieved, where it will be done, the current level of performance, an acceptable range of satisfactory performance, the time the specific objective is to be completed, and the specific nature of the cost and range of the investment. The objectives must be mutually understood and agreed upon by both the teacher and the child.

A second function of managing relates to organization and development of a team that excels. In order for a group of people to be a team they must have common objectives, common problems, and common information. Unless these three points exist in common among those who are identified as parts of the team, there can be no effective management. The teacher has the responsibility, first, to establish the function to be performed by each member of the team, and then to delegate responsibility and authority and create accountability in terms of the job to be done. The team's selection must be limited to identifying those people who can and will get the job done.

Finally, she must establish and install a simple, meaningful scorekeeping system. The range of satisfactory performance must be identified and a recording system initiated to provide in-process and final results. The performance must be evaluated and alternatives designed to provide methods which result in improved performance.

To be an effective program manager, the teacher must know where the child is and where he must go in order to return him to the regular class with a high probability of success. This demands that the teacher has information on the rate and acceleration of performance of the nondeficient child of the same chronological age. When these criteria are met the teacher as a program manager automatically guarantees the child's return to the regular class whenever and wherever possible. This, in terms of the mission statement, may be the major objective of the special education aid to handicapped children.

Earlier, I spoke of delegation and indicated I would make some comments. Delegation is the behavior that separates the program manager from the operator or technician. It may be defined in the following way: (1) to entrust responsibility, i.e., the job to be done and the objectives to be achieved; (2) to entrust authority, i.e., the resources allocated to achieving the objectives; and (3) to create accountability, i.e., the answerability for the end results achieved. Delegation is the only way to move from operation to management. Delegation is the only way to move a plan from paper to reality.

As a process, delegation may well begin at the highest level of management. The state derives its responsibility from the legislature and from the people, and it is held accountable by the legislature and the people to carry out this responsibility. Sequentially, each time responsibility and authority are delegated to another person, additional accountability must be created to insure that the job is done and that the resources meet their intent. At the local school district level when the superintendent or principal delegate responsibility to the teacher they are no longer responsible for that job, and when they delegate the resources to that teacher they no longer hold those resources. They do, however, by definition, create additional accountability. They must create a system in which the teacher must answer for the way in which she does the job and the way in which she expends the resources. In delegating responsibility to the child and authority to the child, the teacher no longer holds the responsibilities or the resources, but she does create accountability. The child in turn must answer for his performance in the final determination and is alone accountable for his performance. There are a number of distortions of delegation and the probability of the teacher's failing as a program manager due to inconsistent delegation of responsibility and authority or failure to create additional accountability may well be responsible for the lack of efficiency in the public schools' special education programs at this time.

If the regular class teacher operates as a program manager, plans with the child's skills and deficiencies in mind, promotes and installs a team to work with him, and precisely evaluates the child's performance in such a way as to limit failure, many handicapped children need not leave the regular classroom. If the child must be given special educational aid outside his regular class, then appropriate programming will insure his return, if only part time.

If we are to educate the child with performance deficiencies, I submit that the model of the teacher as a program manager has potential and the training implications are clear. The teacher is the key, and it is the responsibility of leaders in special education to provide her with the skills and allow her to manage her program as she must.

Leslie Brinegar

The title, "Strategies, Models, and Ideas for Action in Western Colleges and Universities," I assume, is tied to the Conference theme of Contiguity and Continuity in General and Special Education. The implementation of such a desirable thing on any very general basis throughout the country is probably not too eminent and not until certain other first needs are accomplished will there be any progress in that direction.

It is unlikely that colleges and universities will effect substantive and general changes until administrators of general and other programs, such as vocational education and special education, universally agree that our jobs are intended to complement each other's and that we are in the total business together in public education to educate all children. We are a far way yet from reaching such universality of agreement, as evidenced by lack of mutual reaching out for input in "how to program" from each other.

Before we can obtain such universality of agreement, I am almost convinced, partially as a result of yesterday's rap session, that the first priority of business for special education is to define the periphery of its share of the total responsibility for the education of children. These peripheral definitions should include:

1. Descriptions of the behavior of children for whom we must accept fully responsibility.

2. Descriptions of the behavior of children for which general education must assume responsibility.

3. Descriptions of the behavior of children for which special and general education share a responsibility in varying amounts and periods during the child's school life.

Following that, the second priority for special education should be the establishment of accountability measures so special education has the basis for the reestablishment of its own professional integrity. Once that is done we will finally have a rationale for measuring teacher competency and, perhaps, a sound justification for taking potshots at the colleges and universities. I think these things need to take place prior to expecting much change on the part of the universities in preparing teachers to be capable of pulling general and special education practices closer together.

Last fall, the Bureau of Education for the Handicapped (USOE) sponsored a series of working conferences for the purpose of examining, and perhaps reshaping, teacher training in the area of teaching the mentally retarded. In an introductory talk at the first of these conferences, Jim Gallagher (then Associate Commissioner of Education and head of the Bureau of Education for the Handicapped) commented on potential change in a university. He said,

> The process of making significant change in the university is somewhat analogous to trying to get a hippopotamus out of the water. The breaking of the inertia and the movement of all that bulk causes so much strenuous effort that you can expect significant change to take place only about once every 25 years. (1)

If it were not for the fiscal crisis affecting schools and universities in our country, such factors as the increasing self-criticism of education by educators and the loud public cry for educational relevance and accountability coupled with the spectre of the voucher system would be about enough to cause one of those every 25 or 50-year major revolutions in teacher training practices. Because of these same demands, I expect to see within the next very few years noticeable general changes in public school education which will make possible a dipping into some of the minor EMR and EH-like problem kids. This general change will probably reflect itself in the manner in which we utilize instructional and helper staff. Over the opposition of the teachers' organizations we will see some differentiated merit pay systems; not for doing the same things other teachers do, except presumably better, but for doing different jobs which call for higher level knowledge, skills, and the acceptance of greater responsibility for accountability.

Such organizational pattern changes would make possible the employment of instructional managers or programmers (paid high salaries) each of whom might in a team be responsible for a small number of teachers who, in turn, are supported by various levels of technicians, aides, and tutors. The instructional managers are manipulators and facilitators of staff-materials-methods-placement-grouping and in knowledge and skills are akin to the type of teacher we hope our learning disabilities and emotionally disturbed (E.D.) teachers represent.

In order to train these new kinds of people we need to develop some type of staff priority systems within state-supported institutions of higher learning based on the contemporary needs of the state. I was annoyed, although not amazed, to learn that in one of our states a year or so ago when five professors retired out of a large engineering school the university replaced those positions with new professors of engineering at a time when the special education profession had been pressuring the universities in the state to add special education faculty because the state had recently passed a sweeping mandatory special education law. A great contemporary need of that state was for the training of several thousand new special education teachers. The needs of the contemporary society were disregarded and the positions were refilled with engineering professors even though there were already about ten million unemployed engineers out washing windows and mowing lawns in order to make a living.

The setting of priorities, as we have found at this conference, is always difficult, even though we have had the benefit of several consultants. I am through except for telling this one insightful story about a missionary who had penetrated deeply into Peruvian jungle headhunter territory. He discovered that a head-hunting tribe, at the edge of their village, had laid out several piles of brains for sale. Upon further investigation, the missionary noted that brains of elementary teachers were selling for a nickel a pound, businessmen's brains were going for ten cents a pound, brains of lawyers for twenty-five cents a pound, doctors' brains for a dollar a pound, but the brains of consultants were selling for $125 per pound. This discrepancy in the case of consultants' brains led the missionary to seek out the chief of the tribe for an explanation. He understood well enough when he heard the chief's complaint: "If you had any idea how many consultants we have got to kill in order to get a pound of brains, you would understand!"

Reference

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Dr. Dorothy B. Carr

An Approach from a Large Urban School District

Currently, along with general education, special education is undergoing a great deal of change. This process of change affects not only established policies and procedures but also our outlook and attitude toward the technology used with the handicapped. Hopefully, such a process of change will lead to educational renewal. Through careful planning, we should strive to minimize the confusion and uncertainty among lay and professional personnel that often result with such change.

The relatively recent developments of sputnik have caused us, as a nation, to foster in our educational programs competition and excellence for the few rather than an emphasis on such human values as honesty, trust, truth, love, and compassion. In such an era there is danger that the handicapped can indeed become second class citizens, since they frequently do not have the capacity for successful competition with their nonhandicapped peers.

As our population increases, there is an ever-increasing danger of depersonalization in our society. Too often we are known by our computerized identification numbers and subsequently sense a loss of our individual identity. Some of us feel forgotten or lost in the masses. How easy it is to relegate the handicapped to segregated settings and to rationalize that we have taken good care of them! The handicapped, too, feel forgotten and isolated. Provision of tender, loving care and a sheltered environment are not enough and do not meet the needs if we are to assure the handicapped an equal opportunity to their educational, moral, and legal rights. These children need a normative model of behavior and opportunity to value themselves as human beings, to become aware of what they *can* do, and to accept and be accepted.

In line with current interest in ecology, we need to focus upon the environment of exceptional children and the ways that environment may be manipulated in order to bring about a better balance between their needs, based upon their internal limitations and potentials, and the environment in which they find themselves. The trend is away from providing education based upon their etiological or medical diagnosis.

The majority of pupils enrolling in special education programs today have two or more handicapping conditions. Thus it is no longer appropriate to prepare teachers primarily on a categorical handicap basis. Because of the frequent multiplicity of handicapping conditions, teachers also need to possess greater skills in educational assessment of their pupils. Furthermore, such multihandicapping conditions make it very difficult to determine the effectiveness of teaching in existing programs. Evaluative devices are not available for programs.

Sensitivity to the need for integration of all races and colors in our society has provoked new questions for the special educator. Have some colors or nationalities been referred to special education in excess of their ratio in the population at large? To what extent have bilingual children been segregated from the mainstream as suspected retardates?

The financial crisis in education makes us take a much more careful look at the cost-effectiveness of our programs. Programs for the handicapped may not show their true cost-effectiveness except through longitudinal studies, e.g., comparative costs for institutional care and custodial services in contrast to the ability of the handicapped to live in the community, to use their skills, to become contributing taxpayers, and to have greater self-help abilities.

Philosophically, the schools are now expected to teach all pupils with handicaps regardless of the severity of their disabilities. Teachers are not always prepared to cope with that severity. Frequently additional noncertificated personnel are needed to assist teachers with the instruction of these children. Though there has been some modification of maximum class size to provide for such children, educational costs increase substantially. Teaching a greater variety of pupils with varying degrees of severity of handicaps requires offering a greater variety of programs for the disabled.

Parents are seeking mandates to provide services at an even earlier age and continue such services beyond age 18. Arrangement for reimbursement of tuition to parents for private school instruction is legislated in California in the event that school districts, county, or state public agencies are unable to provide adequate educational services, or pupils must travel more than an hour by school bus each way if a private facility is closer to their home.

New programs based on the changing behavior of society have been formulated. The State of California recognizes the growing problem of the use of drugs among young people and has provided for the habituate to be educated in special programs for the handicapped. There is greater need for expansion of educational programs for adolescents with mental health problems or suicidal tendencies. Programs for expectant mothers also have increased significantly. Such girls are educated not only in maternity homes, through home instruction, or, in a few instances, via home-to-school telephone (teleclasses); but also to a great extent through health centers where cooperative efforts are possible to guard the health of the mother and provide for the newborn in the early months while appropriate instruction is offered.

In our desire to improve the quality of education for exceptional children and make it more relevant, we first need to gain information about the local community, to go to research and pertinent literature in the field, to utilize the knowledge and skills of the experts, and to gain as much information as possible about the pupil population (their capacities, potentials, and needs). The existing instructional program for the handicapped also must be reviewed. At the same time, in planning for change, we must keep in mind the many technical factors involved, such as the financial base (including inflationary costs); state code regulations; the present point of view of the school district and community toward exceptional children; the demands made upon special educators to assume new responsibilities for serving the handicapped with regard to types of programs, ages, new types of handicaps, and expansion of services—frequently without additional funding.

Changes in operational procedures of other governmental agencies also have their impact on special education. For example, the policy of institutions for the retarded is to increasingly place more of their patients in foster homes in the community where they will be educated by the public schools.

How well there can be contiguity and continuity of special education in general education depends upon the willingness of all concerned to provide services at the state, district, and community level. Every effort must be made to overcome unnecessary red tape and rivalry that is derived from "empire builders," petty ego obstacles, provincialism, and competition frequently existent in the power structure of the district. Only then is it possible to develop an instructional program based upon the educational methodology needed to meet the characteristics of the learner. Too often our time is disproportionately spent in matters of "administrivia" that do not directly influence the effectiveness of education for the pupil.

The School

The regular school classroom teacher must recognize that an enrolled exceptional child does have unique needs that must be met. Physical presence does not guarantee integration of the handicapped pupil in the class. To sit in class and not to be able to fully participate with peers leads the handicapped pupil to a hierarchy of failures and to become discouraged with education and the school setting. This is a problem in some of the current EMR transitional classes. Integration is much more than physical presence.

As school districts decentralize and greater authority is given to local schools, the trend is to encourage individual teachers to meet the specific needs of each child. This requires the teacher to understand a wide range of learning difficulties and to be familiar with many remedial techniques to assure success for each child. In such programs the teacher must learn to accept a wide range of deviation of pupils in the classroom. More than ever, effective performance will be clearly identifiable and unsatisfactory performance will be more fully exposed.

Goals need to be developed in relationship to what can be accomplished with available resources. Children's needs must be matched to the opportunities available. A variety of new approaches are needed for helping the ever-changing clientele identified as exceptional children.

It is not possible in general education to provide services, resources, and expertise for *all* children for many reasons; among them are limited financial budgets and personnel shortage factors. The Deno Cascade System of Special Education Service (Figure 1.1) helps identify the flow of services needed by exceptional children. Levels one and two of the model can serve children effectively in the general education setting of regular classrooms with the assistance of a part-time resource or itinerant teacher. Levels three and four require services of full-time resource specialists. Level five needs personnel to function in a complete interdisciplinary approach, which would be difficult to provide in general educational settings. Levels six and seven require different educational settings than the school classroom. It is important that no child be deprived of the services he needs, nor should he remain at any one cascade level any longer than necessary in the process of rehabilitation. Gradually, through a process of progressive inclusion, it would be hoped that the exceptional child would require lessening degrees of specialized services as he returns to the regular classroom.

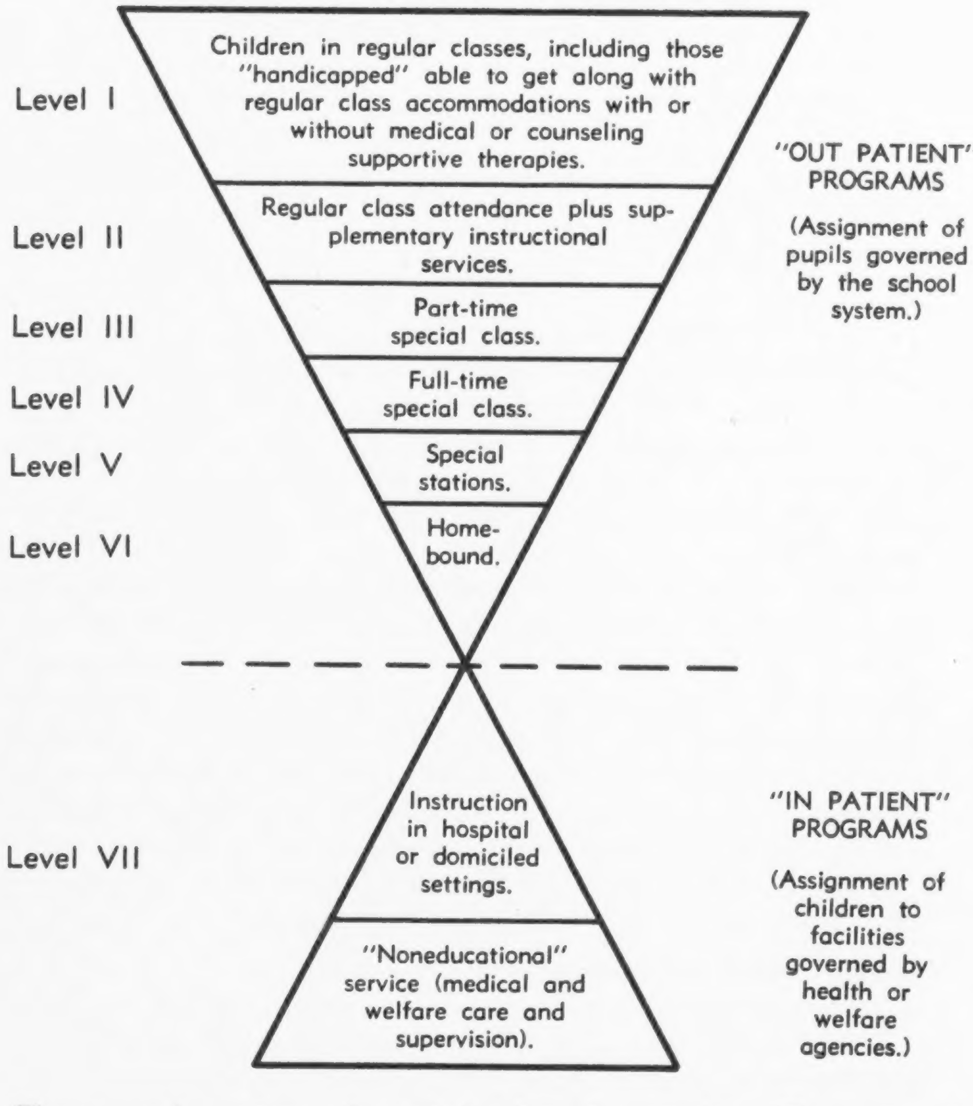
Strategies, Models, and Ideas for Action

Some of these "new" approaches, strategies, models, and ideas for action are not really new, but we are taking another look at them from a different point of view. What is "new" to one person may be "standard procedure" to another. Each reader must view the suggested strategies from his own viewpoint and serve as the transmitter of an educational power-plant in order to determine which ideas may be innovative for his particular environment. A few suggestions follow:

Community

1. School-community workers can be used to help children reach their human potentials.
    a. In disadvantaged communities parents of the handicapped frequently have phobias about attending school meetings because of language barriers, child-care problems, etc. A school-community

FIGURE 1.1. CASCADE SYSTEM OF SPECIAL EDUCATION SERVICE


Level I
Children in regular classes, including those "handicapped" able to get along with regular class accommodations with or without medical or counseling supportive therapies.
Level II
Regular class attendance plus supplementary instructional services.
Level III
Part-time special class.
Level IV
Full-time special class.
Level V
Special stations.
Level VI
Homebound.
"OUT PATIENT" PROGRAMS
(Assignment of pupils governed by the school system.)
Level VII
Instruction in hospital or domiciled settings.
"Noneducational" service (medical and welfare care and supervision).
"IN PATIENT" PROGRAMS
(Assignment of children to facilities governed by health or welfare agencies.)

The cascade system of special education service. The tapered design indicates the considerable difference in the numbers involved at the different levels and calls attention to the fact that the system serves as a diagnostic filter. The most specialized facilities are likely to be needed by the fewest children on a long term basis. This organizational model can be applied to development of special education services for all types of disability.

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worker is an excellent liaison, especially if the native tongue is spoken and cultural behavior is understood.

   b. Many difficulties in the school setting arise in the home. A trained worker can do much to expedite situations over which the school has no influence.
   c. Neglect of correctable defects that may compound the handicapping condition often may be remediated by such workers.
   d. School-community workers may offer assistance to parents with problems that have higher priority of concern through referral to appropriate agencies or through assistance with the labyrinth of red-tape sometimes required by agencies. This frequently is indirectly of significant benefit to the child.

2. Extended use of volunteers, paraprofessionals, and parents in the classroom on a regular basis further assists the meeting of individual pupil needs via individualized instruction and tutorial programs.
   a. College students frequently volunteer their time for such services.
   b. Some college courses require a specific number of hours of such activities.
   c. "Foster grandparents" have been used for such services. They may be the more able from homes for the aged or similar community groups.
   d. Service clubs may plan, organize, and operate such activities as a major service to the handicapped (or a single category handicap) in their community.
   e. Some districts have had "would be" teachers volunteer services for a couple of weeks as a screening device prior to employment.
   f. High school students may learn about the many career opportunities in working with the handicapped through the Future Teacher organization or similar groups.
3. Systematic promotional opportunities can be provided for noncertificated personnel who work with the handicapped.
   a. A high school student who has or has not completed his education may be hired as a full- or part-time attendant to meet the physical needs that enable a handicapped child to attend school. Neighborhood youth corps students have frequently been motivated to complete their education when they see they can make a contribution to someone less fortunate than they are.
   b. After graduating from high school and attending a community

   college for two years with much preparation in child-care, psychology, and special education courses, personnel may serve in other types of classroom assistant capacities at a higher salary.

   c. After completing two years of community college preselected course work, students may qualify as teacher-aides who directly assist the teacher in individualization of classroom instruction.

   d. Frequently such candidates from a well preplanned community college program are awarded traineeships in their junior and senior college years to become teachers of special education.

   e. When graduate schools of education and school districts plan together, college courses arranged for the late afternoon permit a full-time fellowship student to have part-time employment as an aide. Such additional income sometimes makes the difference in whether or not the student can remain on a fellowship. Meantime the school district also benefits from having competent assistance for handicapped classes, and the student benefits by the additional practical experience.

   f. It should be noted that when parents volunteer to work regularly in schools they should not work with their own child. Such parent participation is frequently a much more valuable in-service activity than attending a lecture at a regular monthly meeting. Such participation frequently leads to much greater school support in tax and bond elections and procuring greater community support for the handicapped.

4. Foster grandparents, "teacher moms," big-brother services, and service men's clubs can make unique contributions to the social-ego-and-motivation needs of the handicapped child.

   a. If the handicapped pupil is not reinforced in his own home or his parent will not work with the school, other people such as "teacher moms" or "service-club dads" may fill the gap. Not only do these people give warm interest and a feeling of tender loving care, but they serve as reinforcers and motivators for the pupil. Even as little as 20 to 30 minutes weekly attention by someone who seems to care in a positive framework, who is interested in what the child does, can be most rewarding.

   b. Frequently the unknown needs of a boy reared in a world of women after his father has left home can be served by a regular visit with a service-club dad.

   c. Service club women can do much to fill the gap of a teacher who needs a "room mother" for the social functions so important to the young handicapped children when parents in disadvantaged communities cannot participate.

   d. Activities such as scouting can be sponsored by such service oriented persons.
   e. Transportation for medical services in communities where public transportation is not readily available is another significant contribution of such persons.

5. Some districts are experimenting with contracting with an outside agency that guarantees success in the educational activities to which they have a commitment.

Parents

6. Parents also can make unique contributions to the handicapped.
   a. When they open their home to another handicapped child, such an opportunity not only is immeasurably valuable for the child in need of such placement, but also provides companionship to the parents' handicapped child. If a parent is in need of financial assistance such an activity may permit the parent to remain home and do a better job of caring for both handicapped children than is possible if she is working part-time.
   b. Parents opening their home on a part-time basis to other parents who cannot take their severely handicapped child with them for a week-end or other brief vacation or during an illness, emergency, or arrival of another child in the family make invaluable contributions in meeting the needs of families of children with handicaps.

Teachers and Staff

7. Teacher preparation and staff development are two areas of continuing concern to educators responsible for instruction of the handicapped.
   a. Conducting school from 10 a.m. until 3:30 p.m. allows teachers to receive in-service training and to have preparation time from 8:30 until 10 a.m. A variance of this idea is to schedule school from 8 a.m. until 2 p.m. allowing in-service training from 2 until 3:30. If there is more than one school in the district to be served, an in-service team could serve one school early in the morning and another later in the afternoon.
   b. Payment of substitute teachers to release teachers for in-service on school time is another strategy.
   c. Payment to teachers for a week-end or after school in-service development is sometimes permitted.

d. Cooperation with a neighboring college to provide staff development courses for credit can be arranged. Some see such courses planned for the "information giving" type of in-service, while school time staff development is only for problem-solving and improved efficiency on the job.

e. Professional experts from outside the school district are sometimes used to help with staff development.

Higher and Continuing Education

8. Higher education facilities need to be utilized to develop on-going programs in the area of educating the handicapped.

   a. Expansion of continuing education for exceptional children as well as their nonhandicapped peers is to be desired. This may require legislation to provide excess cost reimbursement to higher education facilities for such services.

   b. If higher education is to prepare teachers to take the leadership role for many of these new programs, colleges and public education systems need to analyze their offerings in terms of the children to be educated. The entire professional preparation program needs to be synthesized based on consumer needs. There needs to be greater relevance and revitalization of educational institutions based on awareness and commitment to these identified needs.

   c. Colleges and universities might wish to consider an "experience prerequisite" for a specific length of time prior to enrollment in preparation programs, such as working as an aide, camp counselor for the handicapped, living with a family who has a handicapped child, or volunteer work with the handicapped.

   d. Teacher preparation for the handicapped must be a combination of theory and practical experience. Research has proven the ineffectiveness of just the lecture method.

   e. Students should be permitted to take leaves of absence for experience which, if unpaid, should be evaluated and given elective credit. Credit for experience may be another way to make the college programs more relevant.

   f. Students should receive credit for independent study or approved research. Such study frequently can be in cooperation with a school district to validate information of mutual concern.

   g. Colleges and universities need to prepare teachers to educationally diagnose pupil needs. Too few such courses are available at present.

h. Teachers must gain preparation and competence in assisting pupils socially, physically, and verbally as well as academically. If schools are to continue self-contained educational programs, a teacher needs skill in all of these areas. If schools are to departmentalize, techniques for team teaching must be developed.

i. It is to be noted that the deterioration of urban education has been unaffected by raising credential requirements. Such observations lead to the deduction that modification of certification requirements to more specific and recognized skills may be indicated.

j. Throughout the history of education the importance of the relationship between pupil and teacher has been emphasized. Teachers need to develop techniques to strengthen their relationship with pupils.

k. Often educators are more interested in achieving degree and credential requirements than in becoming career leadership personnel. The future of education for the handicapped is dependent on such leaders.

l. As accountability becomes increasingly significant, there is a need for colleges and universities to assist teachers in the mastery of program planning budgeting systems (PPBS).

m. Teachers need to develop skill in selecting alternatives as to what, where, and how to learn. There is no one way that is the right method for every child. The teacher working with individualized instruction must have many techniques readily available for teaching various subject matters.

n. Techniques for working with aides and volunteers is another important skill needed by teachers. Too few teachers know how to instruct an aide or delegate specific activities with appropriate instructions to a volunteer.

o. Colleges, too, must give some thought to the preparation of noncertificated personnel. Identification of the most effective preparatory work, including skills in relating and working with teachers, needs to be a part of this curriculum.

Organization, Material, and Technology

9. School facilities need to be expanded in all areas.

   a. When possible, school plants should be used "around the clock" for fullest educational benefits by pupils as well as by parents and community for enrichment, social functions, and remedial services.

The school should be the core of community interest and activity. A study of most school facilities would reveal that they could be used much more extensively than they are at present.

b. It is recognized that handicapped youngsters lose much of the gain made during the year while on summer vacation. The general trend in education to expand summer programs is also a need for schools and programs for the handicapped. Summer school retains more effectively the gains made during the year; it also provides greater remediation opportunities as well as the opportunity for constructive use of leisure time. Housing problems can be reduced somewhat if youngsters continue their education during the summer and complete course requirements earlier.

c. After-school recreation and youth services for the handicapped are desirable. These boys and girls are not readily welcome in park and neighborhood playground activities. Provision of such services should focus on helping the handicapped adjust to his community and help his community be aware of his needs; while at the same time he develops skills for constructive use of leisure time.

d. Though schools for the handicapped need to provide some facilities for a few youngsters to rest, not every handicapped pupil needs a rest every day.

e. Health services of a full-time nurse as well as a part-time physician are desirable. Such personnel can make significant contributions with regard to consultations, the initial screening of the youngster for eligibility and placement, service during the program, and recommendations for consideration of pupils to return to regular school.

f. When youngsters return to regular school from a handicapped program they frequently need counseling or reinforcement to succeed in the new placement. The difference between success in regular school and return to programs for the handicapped may be a special education teacher who has a strong background in counseling and guidance. Such a person assigned on an itinerant basis to 15 exceptional pupils or to five regular classroom teachers having handicapped pupils enrolled in their classes may do much to help the handicapped adjust to the regular school environment and help teachers meet the needs of pupils with handicaps more adequately.

g. Establishment of pupil assessment rooms in special education schools or programs to permit educational assessment of preliminary or developmental learning difficulties encountered may do much to initiate the youngster's instructional program more successfully. This service also may move children back to the mainstream of regular education sooner since such an individualized instructional program can more adequately meet their unique needs.

h. Media centers in each school will permit greater and more effective use of audio-visual materials. If the center is located near the "coffee break" area, more teachers will take advantage of the facility. If there is a certificated instructional material person who can help the teacher find the appropriate materials for the lessons planned, the likelihood of successful and frequent use of the media is further increased. Such material must be carefully catalogued and readily available for systematic circulation.

i. Driver instruction for exceptional children to increase their mobility should be encouraged. In addition to driver instruction, pupils also need to know how to use public transportation. Unless they are mobile, they possess an additional handicapping condition. We need to expand the instructional programs outside of the formal school setting with closer relationships with business and industry.

j. Many occupational and practical skills programs need to be established at schools for exceptional children. Following directions, assuming responsibility, and on-campus work training programs can begin at the elementary school. Secondary school handicapped youngsters will benefit from practical skills programs, from preoccupational and occupational training programs, home management, off-campus work training programs, participation in occupational skills centers, and vocational classes as well as student rehabilitation programs. Observations have indicated that students do not benefit as greatly from sheltered workshop programs as the cost of such services and transportation requires; there is insufficient carry-over after such training in many cases. It is evident that children need more experiences in real-life situations and need to be better prepared attitudinally for the world of work. Parents, too, frequently need such attitudinal preparation.

k. Facilities need to be available for the adult handicapped. For shut-ins, as well as others, ultra high frequency (UHF) television is another strategy to improve educational opportunities for the handicapped.

l. An increased number of preschool programs will facilitate early education of the handicapped and develop understanding of the parents and the community in the following ways:

    (1) Preschool programs regularly involving parents in such programs.

    (2) Preschool programs using older TMR youngsters to learn child-care skills.

    (3) Use of "hard-to-reach" potential drop-out youngsters from a neighboring high school to work with preschool handicapped youngsters.

    (4) Bringing together into a single environment several types of preschool handicapped youngsters, such as physically handicapped, deaf, blind, and retarded, who can share many activities together in the larger group and yet also may receive specialized instruction as needed.

m. Where possible opportunity should be available for children to learn from their peers. This natural method must be carefully planned for the handicapped. In some European countries the benefits of youngsters learning from older children is cited. Stanford University also has favorably researched this recommendation.

n. Alternative approaches to grading and reporting pupil progress must be considered. Parent conferences, use of teleclass conference lines for such conferences, and sending regular positive memos to parents should be considered.

o. Leasing of auditory amplification equipment may prove more satisfactory than outright purchase because of the cost involved.

p. Remedial physical education programs are extremely important for all handicapped children in order to assure the pupils' knowledge of their own body parts and what each part can do; to develop the sociological and psychological aspects of physical education; to enjoy the benefits of rhythms not only for aesthetic reasons but for their value to preacademic programs; to develop strength, endurance, and cardio-vascular stimulation; and to develop skills they can enjoy with their nonhandicapped peers and family members.

q. Orientation and mobility training is needed by most blind students to improve their travel competencies.

The list seems endless. Handicapped youngsters have a capacity to learn so much more than was thought possible originally.

Conclusion

This presentation has been made in the context of a current point in time. We can't fully anticipate the new needs continuously being generated by the unrelenting pace of change. Special education is not on the decline; the opposite is true. However, we may expect it to develop different types of emphasis. We will need to study both the successes and problems encountered in these changing patterns for special education. Legislative changes will be necessary with regard to both credential requirements and allocation of funds. Reciprocity in certification between states would help. Perhaps we can finally abolish medical categorical labels for pupils. Sometimes well-intended services turn out to be restraints. We need to prepare a policy to provide for evaluation of ideas and an opportunity to make necessary corrections. Agencies, communities, and higher education all need to be involved in any strategies concerning special education. Involvement of parents and other community citizens encourages an informed citizenry to support worthy educational programs. There is no single best way to involve these people. There must be a greater acceptance and increased realization of the potential of exceptional children.

Hopefully all of the ideas discussed in this workshop will occur in a climate conducive to human fulfillment, focusing on prevention of handicaps. There must be a continuum of learning throughout the handicapped person's life. Highest priority is for in-service of teachers and administrators to develop positive attitudes for action with regard to these changing patterns for special education. Survival of the system of public education is directly related to the effectiveness and efficiency of the system. We cannot solve all of the problems which beset public education today, but perhaps an outcome of this conference will be one small step for improvement of education of exceptional children.

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Dr. Robert Y. Fuchigami

In a rapidly changing society it is recognized that institutions and individuals respond to emerging social, political, economic, and philosophical forces in various ways and to varying degrees. The directions taken or movements initiated toward any change in existing structures can be attributed to an awareness of the issues and alternatives. Today I would like to discuss briefly some issues that concern teacher educators and, if time permits, suggest some alternatives in training programs.

Basic Issues Confronting Teacher-Educators

Perhaps the most critical issue confronting teacher-educators in special education and one which should be of considerable concern to general educators is the crucial shortage of trained special education personnel. In 1970, Edwin Martin, Associate Commissioner of the Bureau of Education for the Handicapped, reported that 322,600 teachers were needed to teach handicapped children. Only 124,000 teachers were available and of this number about one-fourth were not fully qualified. This shortage was in existence despite ten years of effort by the U.S. Office of Education to increase the number of personnel in this specialized field. Martin also reported that only one out of three handicapped children were receiving specialized services.

Some special educators are beginning to realize that the shortage of trained personnel will not be resolved by current strategies. Kirk (1964) pinpointed the problem concisely when he said:

> Under the pressure of extreme shortages of professional personnel, a major issue becomes whether to (a) focus on immediate needs in terms of the number of special educators without regard to quality; (b) concentrate on quality in the preparation of professional personnel, even though it may mean a decrease in the numbers thus prepared; or (c) find a radically new method of accomplishing both goals at the same time.

The basic question for teacher educators is whether to continue to train classroom teachers, train resource specialists, or attempt to do both. The problems become more complex as we consider various training needs for other types and levels of personnel in differential staffing patterns—from the paraprofessional aide to the master supervising specialist.

The second issue revolves around the growing tendency to keep in regular classrooms many children formerly referred to special services for special classes. Although children with severe disabilities are still given special services in special classes, there is a rising trend toward retaining children with lesser degrees of disability in the regular classroom with resource specialists to assist as needed. Included in this group of students are children with learning disabilities, educable mentally retarded children whose test performances may be depressed due to factors other than genetic endowment or physical injury, and children who show minor signs of emotional disturbance. As more exceptional children are retained in regular classes, it seems almost imperative that regular classroom teachers gain some knowledge and skills to cope with the needs of these children.

Basic questions such as the following can be raised: How can information about exceptional children be included in the training programs of regular class teachers? Should there be separate required courses on exceptional children? How many courses? What are the similarities and differences in training programs between regular and special education? Can we consider dual certification in states where teacher education programs are essentially fifth year programs? In a state where requirements for teacher certification are becoming fewer, how can we insure quality preparation for our teachers so that they will be able to effectively teach all children—regular and exceptional?

A third issue is one that can be shared by both regular and special teacher-educators. It involves newly emerging educational programs such as early childhood education, compensatory education, supplementary education, and vocational education. As more emphasis is placed on developing these programs, both regular and special education teacher-educators will be faced with the problems of coordination and cooperation alluded to in the discussion of the second issue. The major question becomes one of deciding whether to establish a separate set of courses leading toward yet another credential or finding some alternative structures in training whereby all teachers may be exposed to some common information and specialists would receive additional information through other arrangements.

The fourth issue revolves around the problems of race relations. It is clear that our nation has not resolved the racial conflicts evident throughout our land. In education we have neglected to include in our training programs adequate information to prepare our teachers to cope with the educational problems of nonwhite minority children. Neglect and omission of information is a charge that can be directed toward both regular and special education. What are the teacher-training institutions currently doing about the problem in their training programs? What can be done? How many of our training programs have nonwhite minority members on their teaching, supervising, and administrative staff? How many of our prospective teachers are members of nonwhite minority races?

A fifth issue involves opportunities for prospective teachers to participate and interact with children during the course of their training. How can we provide more involvement and participation with children during the training programs?

A sixth issue involves utilization of recent advances in instructional technology which makes it possible to move away from traditional teaching-learning patterns and sequential course arrangements. The development of audio and video cassette systems has virtually eliminated use of the lecture method in the classroom. A well-stocked tape and cassette file will enable students to look, listen, and learn at their own convenience. The new advances also make it possible to utilize resources and services on other campuses. Prominent faculty members might be shared by several campuses cooperating in consortia arrangements. What are the colleges and universities doing about utilizing the new advances in instructional technology?

The final issue I would like to discuss today is one which affects regular and special education at all levels; local district, college, and state. The issue concerns certification limitations. Credentialing structures currently tend to support categorical classification systems. Teacher training programs tend to establish and sequence courses according to content areas suggested by the state. Accreditation review team members tend to interpret the content areas in terms of specific courses so that colleges and universities which might consider changes are reluctant to do so because they might jeopardize their accreditation. The recent move toward program endorsement is a step toward allowing more flexibility, but endorsement is still subject to the review team whose members tend to view state recommendations as regulations rather than guidelines.

In another area related to credentialing, sharp distinctions are frequently drawn between regular and special education. This tends to force parallel structures in training programs. In California we have a situation where persons trained to work with the mentally retarded are restricted to work in that one category. To work with the educationally handicapped—that is, children with learning disabilities or the emotionally disturbed—prospective teachers must have a regular teaching credential but no special training. Yet, when we examine closely the functional behavior of the teachers of the mentally retarded, the emotionally disturbed, and children with learning disabilities, we find considerable overlap in skills, understanding, and attitudes necessary to do a competent job. A credentialing system that allows nontrained personnel in regular education to work with exceptional children, while denying special educators who have some training to work with these same children, presents a discrepancy in logic that needs immediate attention.

In summary, the basic issues confronting teacher educators at the current time include (1) shortage of special education personnel, (2) modification of training programs for regular education teachers to include information about exceptional children, (3) problems related to accommodation of newly emerging educational programs, (4) including more information about minority children and attracting more nonwhite teaching personnel, (5) promoting more opportunities for student involvement and participation with children, (6) utilizing new advances in instructional technology, and (7) problems related to certification.

Some Alternatives in Teacher Training

Some teacher educators who are familiar with the issues mentioned earlier are attempting to cope with some of them by formulating new approaches in teacher training programs. Although it is recognized that changing the structure of a training program will not resolve many of the issues, it is possible that some of the problems may find their solution in one or more of the alternatives. Alternatives in teacher training programs may be classified generally under one of three organizational structures: (1) a parallel structure, (2) a common core structure, and (3) an intern structure.

Parallel Training Structure

Basic features of the parallel structure include the following: (1) separate programs with distinct identities such as elementary education, secondary education, special education, and early childhood education; (2) independent staff to train personnel for the separate programs; and (3) a series of distinct, specialized courses designed to meet requirements for various state credentials.

Some alternatives within the parallel training structure are possible and include the following types:

> Type A programs consist of a series of courses including an observation-practicum near the end and culminating in a student teaching assignment.
>
> Type B programs move the observation-practicum near the beginning of the program and may include two student teaching assignments.
>
> Type C programs offer a student teaching assignment in each semester of a one-year training program. Courses are minimal.
>
> Type D programs eliminate courses and include the content during two student teaching assignments.
>
> Type E programs replace courses with blocks of time called learning

> marathons. Content of the marathons includes topical presentations similar to course lectures, field trips, films, resource speakers, feedback seminars, and other group and individual learning experiences. A variety of field experiences with children at all levels of learning is also an integral part of this type of training program. Student teaching is included as a culminating experience.
>
> Type F programs are similar to Type E programs but are arranged in a different alignment. Courses are eliminated and content interwoven throughout the program by means of individual and group learning experiences. Field experiences are continual so that students are in continuous contact with school children. Like all of the programs in this series, student teaching is the final experience.

Common Core Structure

A second format for training teachers is the common core or common elements structure. Basic features of this structure include the following: (1) a common set of courses or experiences during part of the training program for all education majors irrespective of the type of credential pursued by the candidate, (2) interdependent or cooperative staff to design and develop core areas, and (3) sufficient common elements to enable students to receive or consider dual certification. Some alternatives in the common core structure include the following types:

> Type G programs are essentially parallel training programs with one part consisting of common core courses, activities, and/or experiences.
>
> Type H programs move the common core to the beginning of the training to enable students to select their certification objectives later in the program. Student teaching at two levels can also be a feature of this type of program.
>
> Type I programs are designed to lead toward dual certification with some courses in each of two programs and a common core. Another feature of this type of program includes student teaching assignments in two separate credential programs.
>
> Type J programs emphasize a rotation of field experiences prior to specialization.

Dual certification type programs are more likely to be found in states where it is possible to begin the teacher training program at the undergraduate level. The possibilities of dual certification have great appeal for students entering training programs, particularly when the supply of regular class teachers exceeds the demand.

Intern Training Structure

The third format for training teachers is an intern training structure. Basic features of the intern training structure include the following: (1) in-service training, (2) close supervision and assessment, and (3) individual self-assessment. Some alternatives within an intern system include the following:

Temple University Plan. Since 1954 Temple University in Philadelphia has used an internship program to train liberal arts graduates in secondary education. In 1960 the program was extended to include the area of special education. Two formats have been developed for interns. One is called SELA (Special Education for Liberal Arts graduates) enables students to obtain both their secondary and special education certification in approximately two years and three summers. The second format, called SEED (Special Education for Education degree), enables regular education majors to become certified in special education in one year and two summers. Both internships lead to a master of education degree and certification in special education.

All interns begin with a twelve-week summer program involving a three-week presession, regular summer session, and a three-week postsession. The first three weeks is taken up with a survey course in exceptional children. The six-week session involves observation-participation experiences in the morning and course seminars in the afternoon. The final three weeks are spent student teaching in a private residential school for the mentally retarded.

Johnson Plan. In this plan the intern would be selected by the district and sent to a cooperating college or university for intensive Peace Corps type training during the summer preceding his internship in the district (Johnson, 1968). Focus of the training would be on learning the skills, attitudes, and understanding related to the functional behavior of teachers. During the school year, both the district and the individual teachers would be involved in a continual assessment program. The cooperating college or university could be expected to provide the in-service training during the year, utilizing weekend seminars, workshops, and short-term conferences. Themes or topics would evolve out of district and individual assessments.

Concluding Remarks

Consideration for alternatives in teacher training programs is not a new idea in special education. Many authorities in special education have urged reexamination, reorientation, restructuring, and even revolution of training programs. At some point in time the words need to be formulated into plans or alternatives for action. My efforts today may be considered as a probe in this direction.

Those individuals who desire to initiate changes involving any of the alternatives need to remember some of the variables that could affect the implementation of that change. Such variables include the following: (1) institutional location—rural or urban, (2) institutional size and organizational structure, (3) availability of appropriate and cooperative school facilities, (4) adequate staff and supervisory personnel, and (5) credentialing structure within respective states.

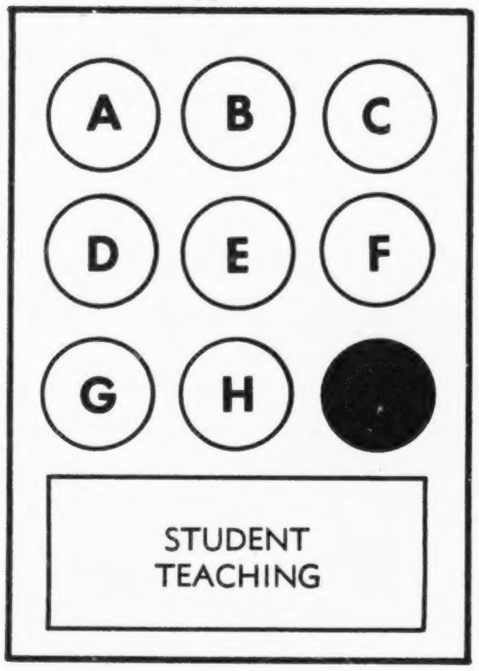
Change is possible. Alternatives are available. Each of us could review our respective training programs and ask ourselves whether we are truly satisfied with what we have or whether we might want to consider another way to train our teachers. At Sonoma State we are beginning to explore some of the alternatives. It is an exciting venture. We hope you will join us.

References

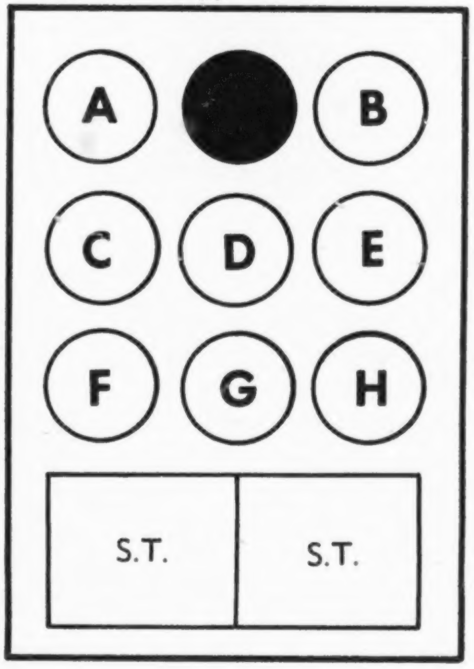
1. Kirk, Samuel A. "Research in Education," in *Mental Retardation: A Review of Research*. Stevens, H.A., and Heber, R. Chicago: University of Chicago Press, 1964.
2. Johnson, John L. "Teacher Preparation for Educating the Disturbed: Graduate, Undergraduate, or Functional?" *Exceptional Children* 34 (1968): 345.

Appendix A

Type A


A
B
C
D
E
F
G
H
STUDENT TEACHING

Type B


A
B
C
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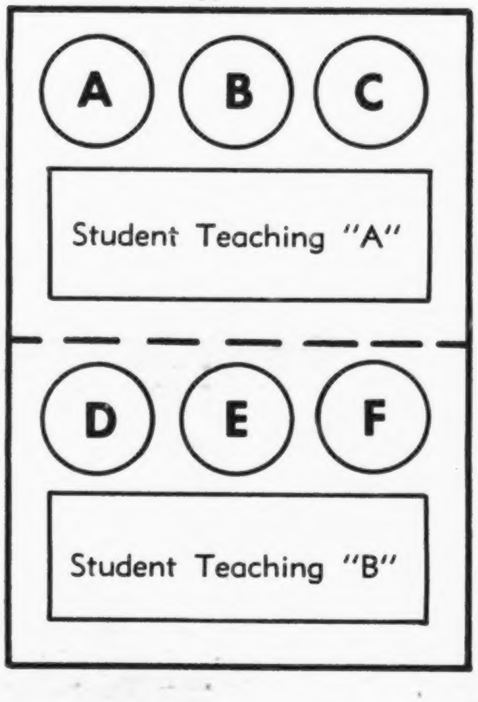
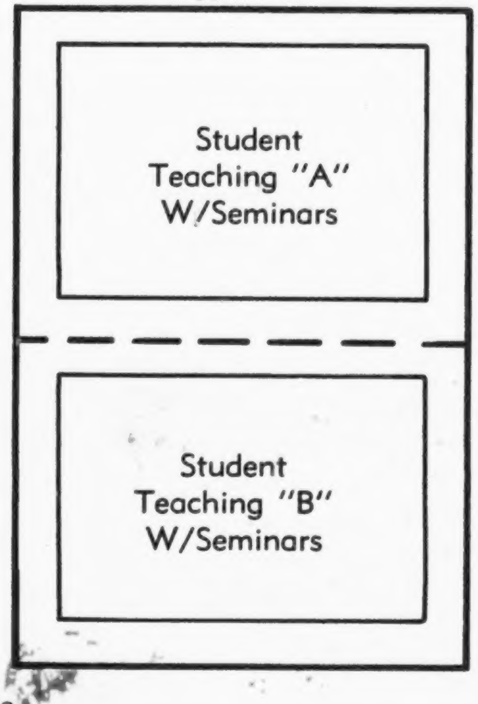
G
H
S.T.
S.T.

Type C


A
B
C
Student Teaching "A"
D
E
F
Student Teaching "B"

Type D


Student Teaching "A" W/Seminars
Student Teaching "B" W/Seminars

Appendix B

Type E

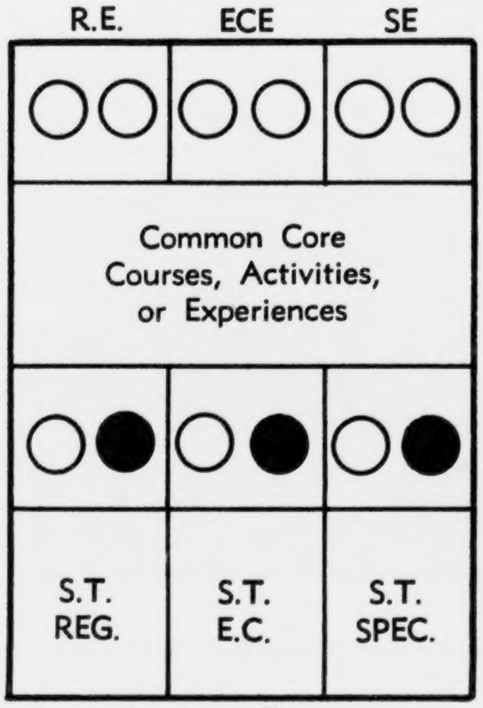
	Prerequisites		
9	Learning Marathon "A"		
10 11	Field Exp. "A"	Field Exp. "B"	Field Exp. "C"
12	Learning Marathon "B"		
1 2	Field Exp. "D"	Field Exp. "E"	Field Exp. "F"
3	Learning Marathon "C"		
4 5	Student Teaching		

Type F

	Prerequisites				
	Mon.	Tues.	Wed.	Thurs.	Fri.
A	Clinical Observation Diag. & Rem.		Individual-Independent Study Experiences	Group learning marathons, e.g., Topical Presentations Field Trips Films Resource Speakers Program Visitations Feedback Seminars VAKTOGing Sessions Microteaching	
B	Preschool and Primary				
C	Elementary to Junior High				
D	Secondary to Postschool				
E	Other facilities				
	Student Teaching				

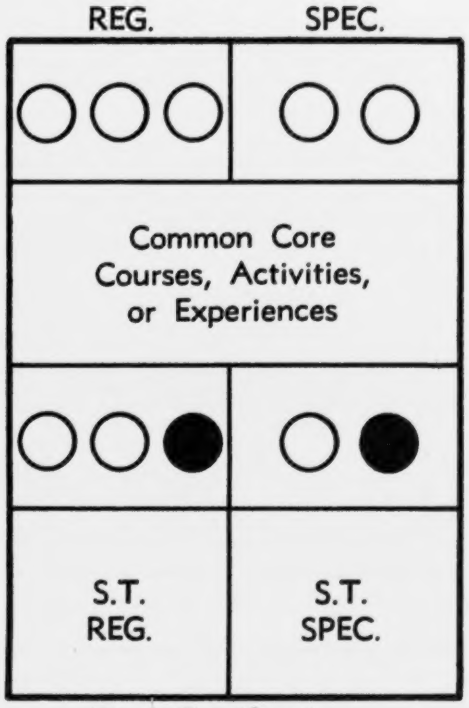
Appendix C

Type G


R.E.
ECE
SE
Common Core
Courses, Activities,
or Experiences
S.T.
REG.
S.T.
E.C.
S.T.
SPEC.

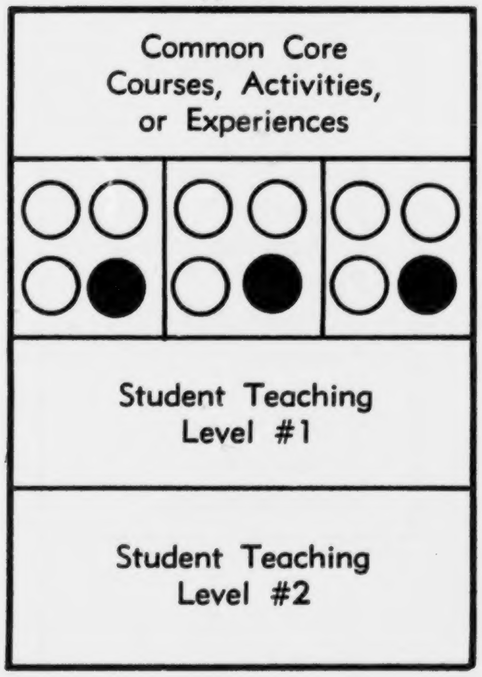
Common Elements

Type I

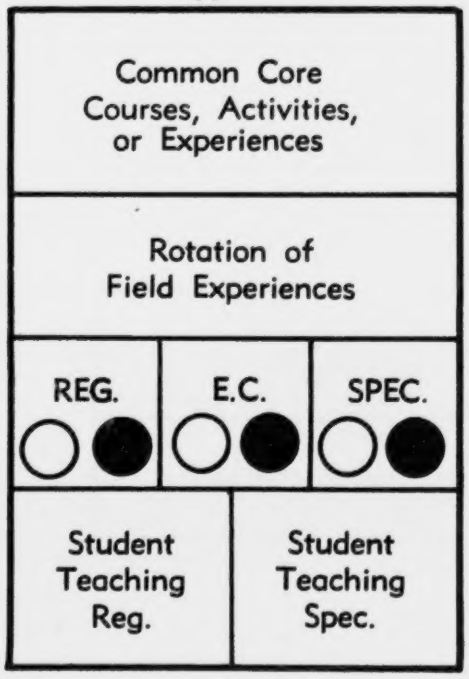

REG.
SPEC.
Common Core
Courses, Activities,
or Experiences
S.T.
REG.
S.T.
SPEC.

Dual Certification

Type H


Common Core
Courses, Activities,
or Experiences
Student Teaching
Level #1
Student Teaching
Level #2

Type J


Common Core
Courses, Activities,
or Experiences
Rotation of
Field Experiences
REG.
E.C.
SPEC.
Student
Teaching
Reg.
Student
Teaching
Spec.

Appendix D

Temple University Plan

Pre.	Survey Course
Reg. Sum.	Observation and Participation in Morning with Seminar in the Afternoon
Post.	Student Teaching
	Supervised Internship
Pre.	Review Problems
Reg. Sum.	Observation and Participation in A.M. with Seminars in P.M.

Johnson Plan

Intensive Peace Corps-Type Training with Focus on Functional Behavior
Supervised Internship W/Periodic Conferences, Workshops, and Seminars

SELA (3 summers, 2 years) SEED (2 summers, 1 year)

RAP SESSION COMMENTS

Factors Contributing to Discontinuity in General/Special Education

10:30 a.m. Friday

Points of concern

1. Broad generalization
2. Paraprofessionals
3. Self-contained classroom vs. integrated classroom
4. Change for the sake of change.
5. Special Services K-14
6. Vocational Training for the handicapped at the college community level
7. Legislative problems dealing with special education

A. Special Education.

Teachers are undertrained for the job. The program was unselective in the beginning. Many teachers in the classroom are too narrowly educated to know how to apply cognitive learning principles. Special education training starts too late in the college level.

B. Manpower development in special education is a mishmash—wasteful and duplicative.

(1) Why isn't a semester or two sufficient to train a special educationalist? It's only an extension of the college degrees.

The special educationalist is only a teacher who has gotten some information concerning how to deal with atypical children.

Problem: Teachers have to get a master's degree in order to work with atypical children. We need to develop a program for teachers early and long before the master's program level. Most teachers are only introduced to special education methods and techniques at the master's degree level which is very poor planning on the part of education and educators.

Master's Degree: The master's degree should be a very devoted and dedicated specialty so that by the time one completes the M.A. the person is an expert in a particular program or in a particular area of special education. We must find economical ways to train people to be expert.

Doctorate: The doctorate program should be concerned with research programs, creativity, and innovation. However, the doctorate programs in most universities are training in special areas.

(2) The training of special education teachers is not comprehensive enough. Special education people should be versed in various fields. If there is to be interface, the person in special education should be able to cross boundaries, should be able to teach slow learners as well as children with speech problems, etc. You must know *special education and general education.*

We are not expert enough in special education. Where are the real ivory towers in special education? We must become experts in special education before we go running off to some other department. Are we running because we don't know enough about special education? Where are the clinical schools? Where is the parallel medicine model in special education? What's in between the local level and the college?

In special education, what teaching techniques and devices have we made?

C. Decade of the '60s.

(1) One of the programs and expansion at the college and local levels. Additional information came in during the '60s but has not been built into the programs which are still dealing with ideals of the '40s and '50s.

(2) In 1964, Nat Gauge, NSS Yearbook, found that he *could not* find one book on *teaching*! He found plenty on learning, but nothing on teaching; only at this time did people start to look at teaching.
Brenner, in his book, *Towards a Theory of Instruction*, says in special education we don't even have a theory.

(3) Long Beach has student observers spending a longer period of time in special education setups.

(4) Too much emphasis on credentials. Too many professionals in field. Need to train aides.

(5) Hopefully in the next five years there will be time to revise the special education program and ask these questions:
What progress have we made?
What's unique about special education?
What information do we have?
What teaching methods are good?

D. Big Concern: Special education's loss.

(1) People seem to be running away from special education and not staying to up-grade what we have.

(2) Need more trained people to go beyond where we are. Let's stop, let the dust settle, and see where we are going.

(3) There is a great shortage of trained people for T.M.R. What will be the role of the special education teacher if children are thrown back into regular classes? Regular teachers don't want these children. Special education, give support!

E. Credentials.

Problem: Look at the psychologists, they don't have a credential to teach or to begin. They can even get an administrative credential! (Another problem, we don't require supervision training before going into special education; the law says so but in practice we don't.)

Pity the poor teachers in special education. They have to get a general elementary credential, *then* the special credential, *then* the administration credential. *But remember*, they can't start in special education.

F. Who are we talking about when we talk about who is going back to regular classes?
EH population that comes in on a sort of rotation basis
Visually handicapped
Slow learning children
Orally handicapped
Physically handicapped—after schools have built wider doors and ramps
Mentally retarded—after they have been trained
2/3 of the children still there, the speech problems were never taken out to special classes

G. Which way do you think we are going?
We are taking a look.

The problem is to keep people communicating.

(1) *Class Size*: Regular teachers can't handle a deviant child when there are 20 to 30 other children in the class. Need general resource rooms instead of special classes where children are locked into a class with a label.

(2) *Medical Models vs. Learning and Education Models vs. Psychological Models:*
Some cases have the same objectives.
Misuse of interpretations of models.
What is the *data* that can be used after all data collected?
How does the teacher use this?

(3) *Mobility*: Acceptance, but not locking a child into a category.
We need a curriculum for special education, but how and who will use a curriculum?
We need a person in each school working in the interdisciplinary fields who has a varied background and comes with broad knowledge.

H. *The nature of man is to constantly reevaluate the program. This is good.*
Programs and children should not be separated or isolated because these children do live in a society and must learn to function in this society.

We must keep the major communicational lines open so that special educators and general educators can come to grips with these problems together.

I. Integration of the programs.
Children in various other classrooms during regular class day come to the *special class* teacher for help. No stigma is attached to the teacher or the children.

J. What's happening to us during the conference? One concept!

First rap speaker: We started off with two physicians identifying for us a group of children and telling us the importance in dealing with them and encouraging us to develop programs in regular education for these kids. They walked off the stage with not one positive statement of what to do, but here they are, and here we are, spending all this time saying, "Yes, we got this identified group of kids." Then we're going to amend a model and rush in and try to do something in regular education by interfacing our skills with them.

We should spend the time at WICHE on the concept of looking at each child and specifying educational objectives for that child. We need to change the categories in the medical model not to no categories, but to categories for instructional effectiveness for all kinds of children.

Second rap speaker: There always seems to be a conflict between the medical models and so-called learning models.

Q: Is a completely deaf 5-year-old a medical problem?

A: No, when the child comes to school it's educational.

Q: What would the doctor say, though? The medical model tells something about the learning model. It seems we're always using different kinds of models anyway. Take the educationally handicapped, is that medical?

A: Unfortunately, it's becoming medical. We are losing it to a medical model because we have not achieved the ability to specify precisely the educational objectives for each child. We have medical models, educational models, psychological models, and learning models and we use all of these not knowing they are so classified. We must learn to use these models effectively! Too many of them are misused and misinterpreted.

Q: What is the educational objective of a child who is unable to function in the normal program?

A: We are beginning to define an educational model for special education. We must look at each child differently, the deaf from the mentally retarded, from the aphasic, etc. The teachers, once they get the child, treat the child for a learning problem. Better communication between teachers and psychological studies and the medical model is badly needed.

K. Training Teachers

(1) Need better training for teachers to become more astute observers of behavior.
(2) Train teachers to become aware of students on a broader basis.
(3) Train teachers to do more with prescriptive methods for children.
(4) Train the aide who works with the children.

Suggested Curriculum Change for General Educators

Teacher Training

Teachers must have practice teaching every year.

General educators should have special education classes and experience.

Universities are not meeting the needs.

Teacher training institutes are hindering progress in the classroom due to set structure.

Education must become more humanized through training institution requirements.

What would happen if the teachers were told to go out and teach without any rules?

It is important what professors are doing at the college level for individuals to prepare them for the classroom in order for them to be really adequate. Many professors are aware of this factor and are striving to do something about it.

The key is to train the professionals to work with parents, volunteers, etc.

Teacher training programs of colleges and universities stress specialization.

Such training must be utilized to be justified.

Teacher institutions seem to stress training to teach in a middle class, white urban area, not in diversified cultures such as the blacks and Chicano communities.

Courses at the University of Colorado and things the Migrant Council is doing are attempting to achieve more relevancy by placing students in contact with children who have problems rather than conducting just a 9-week student teaching assignment at the end of their formal education.

There is a need to make courses more relevant and provide actual working experience so future teachers know *how* to deal with these children.

More practical and useful programs need to be developed.

Utilization of paraprofessionals needs to be investigated.

The system is and/or has changed because teachers (regular) have been taking classes.

Paraprofessionals need to be trained. They would enable the special educator to "zero-in" on the children they are serving.

In order to give teachers adequate background they should have more experience with special education children. Involve them earlier and longer.

Talk about individualization rather than integration.

Sometimes we fail teachers by not preparing them correctly.

Children Placed in Special Education Classes Incorrectly

Once a problem has arisen, many times the school cops out.

Students are misplaced in special education programs because of bilingual problems, subnormal test results, and because they are not considered to be special education problems.

Self-contained vs. regular depends on handicaps. Correct diagnosis most important.

Goal of special education is to see that every child is living in his own home, his own community, attends his own school, and hopefully his regular classroom (the classroom in which he belongs).

Special education says "put them back" but regular education does not "want them."

All teachers must (1) know content and (2) know people.

Empire Building and Job Protection

As teachers we protect ourselves and our jobs too much.

There is fear in some places that the paraprofessionals are going to take the place of the professionals.

Teachers must covet children a lot more and their jobs a lot less.

Leadership

Learning disabilities involve all youngsters. Therefore, special teachers should give leadership and guidance in general education.

Medical Model, Psychological Model, and Learning Model: Are they inconsistent? All three were felt to be needed when looking at the exceptional child.

We need to commit ourselves to greater variability.

Economic Consideration

General teachers refer students to special education for the wrong reasons.

Funding restrictions should be common source and goals. Bring federal representatives to WICHE to resolve restrictions on funding.

What are financial consequences of moving special education pupils back into the regular classroom?

Competition for funds and push for accountability bring purpose out of focus.

We need new empirical evidence to support the program, as well as goals and products.

Teacher education should be child centered as well as content oriented.

Teachers must master content but also be child centered. Too often teachers are only academic in orientation. If we are to individualize and integrate, we must have teachers who are concerned with the whole child.

Continuing Education

We should generate workshops for in-service with regular classroom teachers to bring about a better understanding of special education.

More workshops are necessary for general administrators to improve communication.

We need in-service training to aid teachers in individualization. This is the problem.

There is more concern about present teachers than incoming teachers.

Our retreading should include the competency of individualizing instruction.

The Special Education Class and Its Problems

Begin at local level at PTA meetings to stress importance of special education and what it is all about.

Who are the people in special education?

1. The second-milers are teachers who went out of their way to help. They are good classroom teachers who took additional work and went into special education. They have the right attitudes when they come into special education.
2. The individual who has needs of his own, who has difficulty giving up "his" children.
3. The not-so-good teacher who is looking for a small class.

Without categories will we serve those now in the categories?

What is the will of the decision maker?

Poor performance of "teachers who actually are being special teachers."

The General Education Class and Its Problems

Many teachers don't see pupils as individuals. Many teachers aren't looking at children at all. Some are looking at curriculum only.

Much of our security is tied up into the good old things we've done and we look at the way we have turned out.

Graduate students are seldom asked what they want to learn. The professor makes most of the decisions.

Special educators claim to be child centered, and we often feel that general educators are more curriculum and program centered. We need more of the flexibility of special education in general education.

Include options for students with goals to individualize.

Get children early. It helps assure and promote success in general class. Engineer environment to promote individualization.

The academic vs. the child centered teacher, especially at the high school level, is a problem. The special teacher has been more child-oriented.

How can we expect the traditionalists to change their philosophy in order to have integration and individualization?

What Role for the Parent?

Can we train white, middle-class students to teach in poverty areas?

No reason to assume students have to go into a building to learn to read and write. Can we teach the mothers rather than trained teachers to work with students? Mothers may understand the habits, tradition, or cultural patterns of the children which an "outsider" does not.

If we *do* bring them in, we are assuming they will accept *our* objectives and go back and teach these to their people. When we do train lower poverty students they do not *want* to go back and leave the society they have now joined and "made it" in.

Parents have to set pattern.

Stress "prevention" or preparation for family responsibility.

Problems in the Integration of Training to Achieve Interprogram and Interdepartmental Training

A. More money needed for special education.

To train paraprofessionals and aides to work on an individual basis. If billions and billions of dollars are spent on military machines each year, it seems only fair to spend more money to get at the real problem of these children.

B. Interface seems to take a weird view.

There seems to be an illusion that special education grew out of regular education—and this is not true. Special education grew out of concern for children who were dumped in the hospitals and clinics and from the people who worked with them in nonschool settings. They proved something could be done with them.

Education felt guilty and assumed the education of these children as a public responsibility.

(1) There were institutions for these children long before public education opened to them.

(2) Public education is kicking students out of the door:

   a. Dumping out the drug problem.

   b. Pregnant minors (a social matter, not a handicapping problem—why did special education have to take on a problem like this?).

(3) Special education has had a hundred years' experience with the blind and deaf and is finally trying to get them back.

   Special education should take a serious look and define what special education is in terms of how seriously handicapped or disturbed a child should be before the child is separated from regular education.

C. Developing teacher training.

Special education should stand guard in terms of seeing to it that general education develops its own teacher training to work with those children who are only one or two standard deviations below their classmates.

Regular education should develop its own programming to take care of the children with learning disabilities.

D. What has happened to counseling and guidance and other kinds of services we need?

Special education is here not because regular education wanted it but because parents wanted it and went to the legislature and got a law stating that the public was going to take care of these special children.

Special education has a responsibility to these children we already serve.

Regular education cannot keep sending all of their problems to special education.

It's time for regular education to stop naming new names for children—stop some of the labeling!

The proliferation of categories in special education has been due to the dumping of regular education rather than the creation of a new need for new types of children by special educators.

E. Contribution of skills.

Special education must start helping regular education deal with these youngsters by contributing skills and knowledge to develop their own capabilities in working more effectively with children who have problems or cause problems.

Q: Why is special education being challenged at this time?

A. We have more money and regular education hasn't. There must be more money for regular education to create a beneficial program. Regular education must have more support.

Regular education can do more with programming for the mildly retarded child, the language handicapped, the nutritionally starved, and the culturally deprived to prevent these children from reaching special education.

Fewer children for regular classrooms are needed in many border areas.

The curriculum should be geared to the needs of each child. This is why we have some integrated classrooms with handicapped children.

F. Priorities.

Q: Why are there so few regular educators attending this conference?

A: Maybe general educators have other priorities.

(1) PPBS

(2) Reading instructions—maybe the special child is not high on the list.

G. Teacher preparedness.

General educators should be trained to work with the various disciplines, the same as special educators.

Special educators can become resource people.

Better communication needed between general education and special education with programs and sharing ideas.

Special education showed excellence in educating these children long before general education decided to do something.

Special education should be introduced to college students before the master's degree level.

(1) It is not easy to change a university curriculum.

(2) It is a good idea but we can't do it; it takes time.

Public Law 85-926 monies at the State Department for teacher training which takes time; we just can't run in and use it for any program.

Develop a workable model from which special education and general education can work.

There is a great need for trained personnel to deal with the hospitalized institutionalized trainable mentally retarded. General education and volunteer help can aid in this area.

H. What are we competing about?

Special education should not allow itself to be pushed into a competition with general education. We are here to serve children's needs.

Special education and general education should be getting together in terms of public relations and competing with the legislation and the community to make a rational, understandable, and reasonable bid for more of that 70 billion to help combat the problem that Dr. Fort pointed out to us.

I. Teacher refusal.

Regular class teachers would never stand for having these exceptional children returned to their classroom. Special education doesn't have to worry about that, these teachers have worked too long to get it out of their hair!

J. Dunn's article—a challenge.

Dunn's article was a challenge as to our placement of children. Are we putting children into special education who really belong there?

Dunn feels many children do not belong in special classes, they belong in regular classes.

K. Severely mentally retarded.

The severely mentally retarded child will always require special education. No regular teacher knows how to work with this kind of problem, plus she doesn't have the time with all of the other 25 to 30 children. More than that, many of the so-called regular or normal children present certain kinds of problems to the teacher.

L. An administrative problem.

Part of this is an administrative problem. The administrators don't like to see so much money going into special education. They are the ones who would like to phase it out, unless they get extra money to help regular teachers with problem children who are not classified.

M. Movement of self-evaluation.

The whole movement of self-evaluation did not come from general education or the black people or the Mexican-American people. It actually came from the field itself.

It started back in 1964. Special education had to say, "Let's stop identifying children who can't function in an ordinary classroom situation with some help given to the teacher to help him." Education would not have any *ordinary* or *regular* children!

Three years ago at CEC in St. Louis, a person stated there was a group considering a "division" for teachers of unwed mothers, because some schools across the country did not have facilities in the school for them, and people with special expertise to teach unwed mothers. Special education could carry this on and on to a child with an in-grown toenail on the right toe, etc. So it's healthy for special education to take a look at its program and also to take a *good* look at what's happening in general education.

N. Teacher training.

The teachers who have been teaching since World War II are not really equipped to function in the kind of environment in which they have children with what appear to be educational difficulties, to work with the children while they are being referred. Some children have been sitting in classrooms for a year or two, doing almost nothing, while waiting for a psychological work-up and evaluation.

O. Pressure on legislature.

Parents and other people for the last 8 years have been putting pressure on the legislature to get children out of regular classes who were doing nothing while waiting for referrals. This is how the E.H. program came into being.

The state department makes provisions for experimental credential programs. If a person comes up with a type of program to help and guide children in various educational settings, they can present a proposal. The state will take a look, evaluate the program, perhaps approve it, and allow so many years in which to train people.

There is no need for uniform programs across the state. Just outline the kinds of support needed: back-up support, learning support, segregated classroom support, etc., and people in teaching who recognize the commonalities in working with youngsters. Education needs to stop getting hung up on all of the labels (what's an E.H., a M.R., or T.M.R.?) and work with children who have learning problems.

Teacher training institutions must take a major part of the responsibility of doing the training.

P. Conclusions.

More communication between special education and general education is needed.

Include more special education programs at the undergraduate level. Provide means of in-service training for those who are in general education and special education.

Special education needs to define its periphery of clientele and not worry so much about general education at this time. It should describe who is needed and who has to be dealt with—particularly the EMR, which has the shading that it's no longer to continue.

Emphasis on evaluating what we do in special education.

Improving teacher education.

Define the goals in special education before we do anything else! Communicate with general education so that *education can stop kicking children back and forth from one department into another!*

We can't continue to keep taking on more and more children special education who are not supposed to be there!

Special education and general education *both* have shared responsibilities for all children.

What's good for children in special education should be *good* for children in general education. In some cases, many children have common problems.

Problems in Integration of Training

Dr. Leo F. Cain, one of the conference participants, expanded on his belief that college programs should make more *contact* with people and communities *outside* the academic world, as well as more cooperation between these "worlds."

Colleges are talking about teaching teachers how to individualize programs and instruction while the colleges themselves are *not* able to individualize *their* programs.

Student teachers are being accepted more in school situations and the level of cooperation does seem to be increasing.

Student teachers could be required *at some time* during their training program to spend time in an elementary setting, secondary setting, special education program, etc.

Children should be exposed to *all* kinds of other children (those in institutions as well) so they can become *aware* of irregularities and not be shocked or unable to accept them at an older age.

Cooperation and contiguity could be much greater if people were given a broader base beginning at the earliest age possible.

Opinions differed as to how many *"diversified* problems" *one* teacher can handle in *one* room at *one* time.

Mainly, an attitude change is needed for teachers to accept differences among children in their program and resource rooms at *all* levels of education.

Where can you put 1200 majors in special education when enough classes to observe or aid are not available?

It may be possible to get some classes to a one-to-one situation with this many resource people available.

Many teachers are uncomfortable with aides and therefore need to be educated in how to use them.

Should we tell the teacher she needs to be *creative* in *utilizing* an aide and identify how she can best do that? Perhaps then she *will*.

Money needs to be redirected toward undergraduate programs because we are getting "top-heavy" with doctorates. How can support for doing this be achieved—and from where?

The least likely place to do this seems to be at the university. It can be done in some new schools with innovative faculties but *cannot* be done in an established school with an *inherited* faculty that is impossible to change.

In-service education for teachers for redirection needs to be strengthened. This can be accomplished or improved on by cooperation between the state departments and the universities.

Concerning the training of student teachers, practicum experiences demand more coordination with school administrators to provide a meaningful program. Some method of remunerating participating teachers could become necessary. Or is this an inherent responsibility of practicing teachers?

Increased emphasis should be placed upon initial teacher recruitment and selection. Removal of tenure laws would do much to improve quality of teachers. Early exposure of college students to the classroom is necessary to determine interest in teaching children.

The suggestion was made that school administrators specify the type of person (teacher) they think best qualified to teach the handicapped. The teacher training colleges would then teach to that prescription. The question was raised as to whether the administrators would be familiar enough with special education to even *know* what kind of teacher they wanted.

It was suggested that teacher training institutions be made responsible to the state department of education for the scope and direction of training programs. This would provide a centralized locus of guidance and control.

The off-campus experience tends to be a better method of teaching or learning how to prepare our young people for their profession.

It is time to teach joy, love, and compassion.

How can we identify a good teacher from a "bad" one?

It might be best to permit the students to vote at the end of the year as to whether the teacher was a good teacher or a "bad teacher." Possibly it would be a solution to allow a student teacher to go into a classroom without another teacher. When problems arise, the real teacher can sit down and have a "rap session" with the student teacher.

In order to change, we would have to shake the whole system.

We could say that special education doesn't exist in the school and just put all of the students in the same area and tell the teacher that the problems of the pupils are identified and that she will have to solve their problems. The teacher would have to decide what the pupil's deficit is and then work to alleviate that deficit.

Get teachers who are willing to try the new techniques in order to solve the many problems of the different pupils. Build a new school and hire only those teachers who are willing to try the new interventions.

The emphasis should be put in the right areas. We should concentrate on the best teachers at the elementary level.

We are not zeroing in on the real needs.

"Let's protect categories or else we are out of a job." This feeling seems to be common in special education.

We can't perpetuate systems that don't work.

You can't teach communication interaction in the university setting.

Teachers must be consistent—they don't have to groove.

Traditional teachers aren't bad.

We should allow for the individual differences in teachers.

Have advances in educational technology progressed to the point where we can now *truly* individualize or will we face the same problem?

Regular teacher needs to know about special education and more about referral reasons.

Anyone who teaches teachers at the college level must return to the local level for one year's teaching every five years.

Funding—there are not enough ancillary services to specifically remediate.

Allow more freedom in teacher training so that there will be a broader background in education.

There should be more positive public relations involvement of teachers to the extent of "I am my brother's helper."

Would practicum/observation be helpful?

What is the task of teaching?

State requirements and standards for certification limit flexibility in setting up teacher training programs at the university level. Evaluation teams reinforce rigidity.

Special programs may be implemented if approved but procedures to gain approval may discourage application.

Perhaps failure to establish new programs rests with inertia on the part of the teacher preparation institution rather than state board of education controls.

Communication between training institutions and the state department of education that will ensure exchange of ideas, cooperative planning, and adequate evaluation is imperative.

Interdepartmental dialogue needs to be encouraged at the university level, particularly with prospective administrators who will have to give leadership to special education programs.

Requirements for administrator certificates are not flexible enough to allow for the taking of elective courses in working with special education courses.

There is a lack of evaluation and feedback regarding preparation and training of administrators from local districts. Such a program could greatly improve administrative practices.

The nature, size, and composition of school districts mandates that there be a difference in the kind of preparation given teachers and administrators.

Special education needs to define its periphery of clientele.

Increased communication between general and special educators is needed, especially when dealing with "peripheral children."

Role of administrator: Should he supervise teachers or should qualified supervisors?

Problems of integration: Philosophies of training programs are philosophies of undergraduate and graduate programs that perpetuate isolation or integration of two fields.

Has human variability been slighted in training?

Is in-service practical and useful?

We are training and perpetuating dependent teachers but are expecting independent performance.

We do a good job, "but we talk to ourselves."

- Relationship to general education
- Relationship to administration
- Relationship to medical profession
- Relationship to social worker
- Relationship to psychologists

Offer "our staff time" to regular teaching and administration programs to promote interdepartmental cooperation.

Relate teacher training into operating programs.

Responsibility of state department to develop "in-service packets" for administrators.

"We feel we need to relate to regular educators." How many regular educators have actually asked us to relate to them?

Interfacing must proceed step by step. Sequentially, how can we eliminate the concept of "deviant child?"

Maybe we "haven't made a mistake." Maybe our error is in creating inability to *interact.*

Evaluate the model of placement procedure. Problem may be teacher or program problem rather than pupil problem.

Lack of text books on the "teaching process."

Question is not "either/or" but both and in-between.

What too often occurs now is that local level only communicates with itself.

The special educator must remember he is first a general teacher and thus involve himself in planning the total program.

Teaching has traditionally been content centered and many teachers are teachers because they want to teach content. How will the integrated special child fare with this kind of teacher? Can we expect this kind of teacher to be able to work effectively with the special child who may require a teacher with a child-centered approach?

SUMMARY OF CONTIGUITY AND CONTINUITY IN GENERAL AND SPECIAL EDUCATION

Dr. Mio Polifroni

Being at the conference was a great experience. I came into contact with a group of colleagues I really did not know I had. It came across clearly that the general educator (teacher or teacher-educator) and the special educator (teacher or teacher-educator) both have as their purpose the optimal development of each child. In this view they have more in common than they do apart. Both are working with children, each of whom is an individual with needs and potentials all his own. Those needs and potentials are greatly varied, and it takes a skilled, dedicated teacher to meet them whether the children are in a special or regular classroom. The differences in these two kinds of classrooms differ in degree of severity of problems, but the problems are basically similar and run along a long continuum in any classroom.

I would like to see both special and general education work together in identifying: What we hope children gain from being in school. What kind of learning environment best maximizes children's development. (I think we would agree that we must be concerned with a child's total development, not just one aspect of it.) What kind of teacher training best equips prospective teachers to be able to provide that environment both in general and special classrooms. What kinds of equipment, materials, and services teachers need to be able to provide and function best in that environment.

Then we need to band together to demand the funds and the authorization necessary to do the job. If the educational establishment (including teachers, administrators, and teacher education personnel) really raised its voice loud enough and acted in concert at the ballot box and in the legislative and congressional halls, we *might* be able to do it—for children. But we would have to forego professional rivalries and really cooperate.

I have the feeling that none of us are anywhere near really knowing how children learn or what causes problems. All we have are educated guesses. The more we work together, the more we can share insights and deepen our understanding of children and the learning process.

We can start now by finding ways of cooperating:

1. By developing new, approved programs of teacher education, especially at the preschool and primary levels; for example, joint teacher education

programs where core courses are taken by all and special courses are available to those who want them as electives or to qualify for special education credentials.

2. By offering services, even on a volunteer basis between teacher education departments, between classrooms, and to private schools who can more easily institute pilot projects.

3. By developing the team approach (parent, teacher, educator, physician, social worker) at whatever level possible and wherever we can.

4. By instituting open-structure type classrooms (perhaps three to five classes as a unit, either all one grade or several grades) with the teachers, including one special education teacher, working as a team with paid or voluntary aides and keeping the special education children in this unit with the regular education children.

5. By concentrating on *young children*. Preschool is not too soon. Disabilities can be ameliorated or even in some cases prevented if symptoms are caught soon enough, particularly with team effort. At least their negative effects can be minimized. Nursery school teachers are geared to the individualized approach to working with children, to working as a teaching team, and to working with parents. They are eager to work with professional persons in other disciplines for the good of the individual child. Perhaps we could cooperate most easily at this level which is still flexible, open, and creative in its approaches.

6. By working together on developing understanding about and relationships with poverty and minority groups.

Could we establish some task forces to tackle some of these issues? These would need to be local groups so we could meet easily and be able to marshal together community resources.

PROCESS ANALYSTS: (L. to R.) **Tom J. Hicks,** Director of Special Education, Department of Education, Little Rock, Arkansas; **Earl B. Andersen,** Consultant, Exceptional Children and Youth, State Department of Education, Division of Instructional Services, Juneau, Alaska. Not pictured: **Alexander L. Britton,** California State College, Long Beach, California; **James E. Wiggins,** Consultant, Department of Education, Denver, Colorado.

PROCESS ANALYSTS' REPORTS

Alexander L. Britton: Los Angeles Conference

Yesterday morning, when I received a copy of the program, I discovered that I was to serve, along with Tom Hicks, as a process analyst. I'm not certain just what type of an analyst that happens to be; but I have always wanted to be an analyst, so I have decided to analyze the process of the conference as it relates to the various phases or stages of development in psychoanalytic theory; that is, from a Freudian orientation.

It appears to me that this conference was born late and rather underweight with very slight birth trauma. We were considerably behind schedule yesterday morning by starting late. We also had far too few participants in attendance. As we progressed we may have reversed the position of stages through which a Freudian may have expected us to move. My impression of the conference on Thursday was that it went through the anal stage initially. The pace was rather rapid as well. Hence, I would say that there was little if any fixation at that state. There may, in the opinion of some, however, have been a little fertilizer spread over the seeds of wisdom that had been planted by the two very able presenters from the South.

The oral stage seems to have encompassed the conference at great length this morning. From the facial expressions and other subtle responses on the part of the participants too much time may have been devoted to the venting of verbal hostility against special education. Brief visits to each of the small group discussion sessions gave added evidence that the conference had lingered, healthfully perhaps, in the oral stage.

Looking over the audience at this late hour after everyone has participated in the general sessions and the small group discussions, it is rather obvious that the conference has most definitely hit the latent stage. Most of you look exhausted. Thus, one must question whether full maturity will ever be achieved. Being aware of the calibre of most of you who have endured and also being familiar with the quality of the presenters scheduled for tomorrow morning, I am quite certain that by the time we adjourn this conference will most assuredly achieve, in the Freudian sense, complete healthy adulthood.

With that brief analytic assessment of the conference to date perhaps most of you would like to hit the freeway or whatever else people in downtown Los Angeles tend to hit at this hour of the day.

Tom J. Hicks: Los Angeles Conference

The process used to develop the program for the Los Angeles conference was one which had been used twice before. The two previous meetings must surely have proved useful to insure the success of this particular one.

The idea of combining persons with backgrounds in special education with those in general education was most successful. To provide the needed input for meaningful dialogue, the idea of the mix was ideal. There were perhaps too few persons representing general education to completely fulfill the necessary balance; however, this did not present an obstacle to conversation nor confrontation.

Many of the persons representing special education were very sophisticated in their backgrounds and experiences. This level of participation was certainly a welcome change from the usual list of participants one finds at such conferences. This list of participants represents some of the best in the field of special education in the western section of the nation. In contrast to this informed and prepared group, it would have been helpful if the presentation on learning disabilities could have been more in depth and less on surface knowledge theory. The presenters were very capable of a higher level of explanation, and it was felt that the group would have received this discussion better if it had contained more new information for them.

The small group discussions provided an excellent opportunity for interaction of the two groups and also an opportunity to fully explore the idea of a discontinuity in the educational system. The lack of persons from general education restricted the dialogue somewhat but a general consensus was reached in each of the group sessions.

Particular notice was made of the excellent student participation. The use of these students definitely added another dimension to the group. From observing these students it was apparent that the experience will long be remembered by them.

Every successful conference leaves the participants with ideas for reflection and expansion. The following are some personal comments which I feel are relevant to this conference:

1. Special education has done the most work in the area of understanding children's needs. The whole idea of individualized instruction was an outgrowth of special education. Special education can adjust to new situations and it can assist general education in its own adjustment.
2. The basic philosophy of education has been to educate each child to his fullest capability. One-room teaching was tried and uncertainty resulted. Isolated teaching methods were tried and educators wondered. Now the idea of grouping similar to the one-room technique is again being evaluated as a possible trend.
3. Regular teachers can provide educational experiences for handicapped children in the regular classroom provided extra preparations are made to receive them. The receiving teacher should have a supply of strategies for teaching this type of child, and the total student popula-

tion in the class should be reduced to compensate for the additional achievement levels in the group.

4. The use of paraprofessionals trained to work with the handicapped should not be overlooked as a possibility for the regular class. These persons function well as team members and can provide competencies necessary at a much lower rate of salary.
5. The question regarding discontinuity was originally raised by the special educators themselves. This is a good analytical process for special educators and much good can come from this type of soul searching.
6. Nothing worthwhile is accomplished in education in isolation and a vacuum. It is necessary to provide interaction with general education and special education to accomplish the stated tasks. School should be a good place to be. Through close cooperation with general educators and special education it can be.
7. Freckles alone are not usually considered attractive; however, if they were to get together, a nice coat of tan would result. This is symbolic of the status of special education and general education. If they get together, a very pleasing product in a complete educational program for all children would result.

James E. Wiggins: Denver Conference

Fear, Doubt, Hostility, and Frustration. These were the feelings expressed by special educators, administrators, and teachers who attended the conference in Denver, Colorado, at the Cosmopolitan Hotel, February 4, 5, and 6, 1971. The conference was entitled "Contiguity and Continuity in General and Special Education."

Fear and Frustration. The special educators attending the conference had a vested interest in maintaining the status quo in teacher education, but they were frustrated by the demands of improved services and improved quality in the training of teachers and services to students. This frustration and fear represented a basic insecurity and threat to their careers as special educators. It was a fear of change; a fear of losing the educational empire that had been built up over a period of time. The motive was unquestionable, but the results were questionable.

Doubt and Frustration. A great deal of doubt was generated over the special terminology that is used by special educators in expressing ideas and concepts to the general educator. Is this really necessary?

There was doubt and frustration over the roles of the colleges and the teachers in effecting changes for handicapped students; doubt and frustration over the labeling and placing of students according to handicapped category; and doubt and frustration over the demand for change. Change does not necessarily mean an improvement in the services to handicapped children; nor does change, in and of itself, alter the basic reason for special education classes or services. The basic questions throughout the conference were: How has the situation changed? How much can we expect from the regular classroom teacher? Is what we're doing now really bad?

Hostility and Frustration. There was a feeling of hostility and frustration expressed because of the lack of funds to bring about change. Hostility was also expressed toward those unknowns who are implying that what special educators are doing for and with children is wrong. There was hostility and frustration because of the lack of school facilities, lack of services, and lack of commitment by school districts for services for handicapped children. Also, there was hostility toward the *system* which many felt had been perpetuated merely for its own survival.

Hope. The participants expressed a feeling of hope and encouragement that in meeting the demands for change, for improved services, and for improved competencies of the special education teacher as well as the regular classroom teacher there will be an examination of what we have been doing and a long hard look into the needs of the future and the resources to meet these needs. The *system* needs to be reexamined and the empires brought down to serve the needs of children and not be self-perpetuating; and the ego involvement and job security need to be vested in serving and meeting the needs of handicapped children, not the *system*. There is nothing to fear in change as long as that change is to better serve the needs of the students in the schools, colleges, and universities of today.

Earl B. Andersen: Portland Conference

The prerogative of one who assumes the role and function of conference process analyst carries with it a dualism, namely the opportunity and liability of reporting a series (range?) of transitional truth. This behavior has aptly been described by purveyors of wisdom as "risk-taking." The degree of risk-taking is, in turn, linked to a commitment, enough of a one to make a grown man try. So, come, try with me—if you dare.

The Number 2 WICHE conference in Portland, held February 11, 12, and 13, 1971, was an excellent, productive, and, at times, provocative example of issues and concerns now being encountered in educational environments of the Pacific Northwest. At the outset of this follow-on report of the conference, it seems important to note that the terms "contiguity" and "continuity" were new and did not have clear meaning for the majority of participants. Although objectivity is a desirable goal in reporting, it should be recognized that the spectre of subjective bias cannot be ignored and, therefore, will be reflected in the report to follow.

The global impact of the Portland conference was in many ways akin to the current and increasingly relevant construct of ecosystems that seems to help us comprehend and become more critically aware of the vital linkages that enable the life of the learner to be sustained. Education, now more dynamically interpreted as a cascade of learning processes, was treated by conference participants as a total system, each part wholly dependent upon the others for existence; indeed, for survival.

Thursday was a good day. Following Jim Bradshaw's always loquacious greeting, welcome, and overview, the morning and afternoon sessions were devoted to a stimulating dual presentation by two teaching physicians, Arthur T. Fort, Obstetrics and Gynecology, Louisiana State University, Shreveport, and Marvin Gottlieb, Pediatrics, University of Tennessee School of Medicine, Memphis. Constructs were developed and interpreted which focused on current and projected data; and conclusions related to pre- and postnatal development, growth, and related medical intervention. Art Fort very ably related his concerns in terms of the chain of events that occur during the prenatal period with emphasis on genetics, the poverty of potential for development, and the linkage to the learning style of the individual infant, child, adolescent, adult. The following thoughts and formulations were shared:

1. Look at the "life-style" of the mother. No prenatal care plus inadequate prenatal nutrition produces prenatal famine, a causative factor for most, if not all, learning problems.
2. Birth weight is now a reliable prognosticator. The lower the birth weight, the less intellect, motor coordination, socio-emotional adaptiveness, good (adequate) general health.
3. *The great brain robbery* was, is, and will be committed by poor incubation, prenatal famine, premature birth, and ignorance.
4. The decade of the '60s saw a dramatic, significant increase in the number and distribution of teen-age illegitimate births: 1960—69,000; 1970—320,000.
5. The teen-age mother is a poor mother any way you look at it: (a) maternal mortality rates are high; (b) premature births are 25 percent higher; (c) there is a 50 percent increase in illegitimate births; (d) the divorce rate is 50 percent higher.
6. Question—problem? As educators, how are we going to change this set of causative behaviors? How can we "rework" the incubator, the teen-age mother?
7. Investigation of early pregnancies reveals that a "low index of self-esteem" seems to be a G factor. Also, many potentially influential adults (parents? teachers? counselors?) cannot and do not believe in the idea of a low index of self-esteem as causative, particularly in the middle- and upper-middle socioeconomic groups in American society.
8. Education is a total societal responsibility. Ideas, collections of knowledge, thought processes, etc., should be linked to curricula for living. The "planting" behavior is only a start; it must be done properly not casually. We are, or should be, investing in "geno-save" not "genocide."
9. We are entering an era of negotiation, not confrontation. A comparison of all factors is on the side of birth control pills, regardless of the side effects.

10. We need to package accumulated knowledge and then honestly present what we have learned—focus on youth's logic, not morality.
11. We must get to the educators and incorporate their accumulated skills in a learning process that can functionally provide the total range of prenatal care to all learners.

Marv Gottlieb followed Art Fort with a stimulating and very effective presentation focused on the developmental period, birth through middle and late adolescence. It was of value to take this trip again; to be reminded that deprivation-retardation is a viable construct and that the past twenty years have, in effect, produced a phenomenally rich and varied set of resources to help us all better comprehend the multivariant behaviors of the infant, child, and adult. Here are a few selected thoughts from his presentation:

1. It is now reasonable and expected that developmental sequences will be viewed globally; to comprehend the linkages and effects of each phase of postnatal development on the individual learner at a given point in time.
2. Knowledge is no longer the exclusive domain of a selected group. It is shared by all individuals who can and are investing time and energy in behavioral change processes (e.g., the revolution of technology).
3. Appropriate *stimuli* at appropriate times and places can have an enormous strengthening effect on the intellectual and social aspects of life. Likewise neglect produces measurable and predictable potentials for inadequacy and nonfulfillment.
4. It used to be thought that 2 to 3 percent of the general population was "learning disabled." Now, clearly, it is close to 16 percent.
5. Versions of mental retardation as a crippling disease outclass all other such problems we face as physicians. As infant mortality decreases, the accumulated number of surviving disabled persons increases.
6. The "linkages" are more clearly seen now. Identification (diagnosis) is the responsibility of all who can and do contribute to an understanding of the ages and stages of human development.
7. Learning handicapping conditions are the inclusive product of three major forces in society: medical, educational, and social.
8. Deprivation-retardation is a "social disease." We are aware that the skills necessary to accomplish a refined "minuet" are somewhat different than those required for the grossness of a "watusi."
9. What are the implications when one makes note of the fact that three out of ten children and youth in vocationally oriented curricula are etiologically mentally impaired? When and under what "conditions" can we alter the now apparent fact that this nation is still only adequately serving two out of each ten who are learning handicapped?
10. The MBS (Minimal Brain Syndrome) has emerged as the high incidence condition related to learning disorders. However, it is difficult to identify, for the following reasons: (a) MBS is not a reportable disease; (b) MBS is almost never diagnosed; (c) nothing can be done to eliminate its cause; and (d) MBS is often erroneously diagnosed to explain other disorders.
11. Early and proper (complete) diagnoses combined with effective (relevant) management techniques and adequate multidisciplinary planning can do much to provide the MBS child and youth with the guidance and support he needs.

12. Prognoses and developmental programming for the MBS learner are both attainable and feasible. Resources now available (parents, special educators, behavioral systems resource persons, medical specialists, general practitioners, and educators) can and should be organized and mobilized to assist the handicapped learner from preschool through adulthood.

Matt Trippe's General/Special Education Interface, scheduled for the Thursday evening dinner sessions was, unfortunately, not presented due to illness which prohibited his attendance at the conference. However, Gene Hensley, Hawaiian sun-tanned and congenial, served admirably in Matt's place and provided the assembled conferees with a short but focused preview of his position and predictions about needed and long overdue changes in the sequence of teacher training. All this—by way of introducing the fact that a more thorough version would be shared with the "survivors" during the Friday afternoon session. As has been noted earlier, Thursday was a good day.

By 10:15 (better make that 10:35) Friday morning the conferees were headed for the first of three scheduled Rap Sessions contemplating the input from an opening session symposium entitled "Discontinuity in General/Special Education" and featuring the biases of Keith Larson (Portland State), Wayne Lance for Bob Gilberts (University of Oregon), and Hank Bertness (Tacoma Public Schools). Keith noted:

1. Special educators are more willing than are general educators to accept: (a) children who are "packaged" differently, (b) the existence of a wider pathway upon which to lead the learning handicapped to human dignity, and (c) the continuing responsibility to tolerate a child's failure to learn.
2. No administrative arrangement per se will alter or change the special education teacher's capacity to deal with the handicapped learner.
3. The focus should remain on strengthening teacher competencies and attitudes: practical factors are as valuable as theoretical, philosophical, or literary considerations.

Wayne Lance, substituting authentically for Bob Gilberts (he read Bob's paper), put it this way:

1. Special educators are in business to get out of business.
2. Federal, state, and local statutes have all promoted the separateness of categorical identification and programs for the learning handicapped: change is needed and desirable.
3. Teacher and administrator training programs can and should reflect the concept that promotes the sharing of mutual skills, knowledge, and competencies.
4. Instructional competencies can and must be accurately and adequately described (training institution and field).
5. Support and become involved in the current emergent move to "incorporate knowledge and information about all children and all trainees." We need to pull proven, functional, innovative community experience into teacher training institutions.

Suave, perceptive, Hank Bertness focused on the school community and its continuing relationship to special education. He had some great things to share:

1. Be concerned about the greater problem, i.e., separatism. Polarities do seem to exist between special education and general education. Are they real or might they be functional fantasies?
2. Many states (including Washington) have a legislative baseline that promotes and legally supports the concept of serving all of the children of all of the people all of the time. Educators, by interpretation and accumulated ignorance, have promoted separate programs. What has been done can be undone. Let's do it!
3. Are we at all clear about the reinforced precept concerning the learning handicapped that comes from the teacher training institution? What, exactly, is this precept? Do we really know?
4. How about parity, i.e., public education and higher education in partnership in dealing with the learning handicapped? Both have much to offer.
5. Now is the time to shift from categories to programs. The technology of learning makes it possible to use a systems approach that can effectively reflect and enhance the "responsive environment."
6. Let us stop "education for devisiveness." If you learn to deal with devisiveness, there is a price. We have the information and potential to deal with it. It is no longer a mystery or a puzzle. Trust, willingness, acceptance, mind, and spirit are change factors; they are positive forces. The negativism of discontinuity is simply not productive.

The Friday afternoon session was devoted to Gene Hensley's presentation on "The Reintegration of Training," followed by Rap Sessions dealing with "Problems in the Integration of Training to Achieve Interprogram and Interdepartmental Training." By anyone's measure, this attempt was an ambitious one. Gene had much to offer:

1. To be effective, the basic change model must be related to and become a part of both preservice and in-service training.
2. Official terminology that categorically defines a learning disability is now beginning to shift toward the more useful, convenient, comfortable "defineable for me" construct. We need to continue to encourage and develop this trend.
3. Professional preparation should be inclusive, not exclusive. There is an expanded awareness of multivalue and belief patterns that should be encouraged and developed within the training institution.
4. Have professionally constituted diagnostic teams really been effective? Essentially, no. A new updated team concept should be developed.
5. We have some discernible problems:
   a. Overcoming the tendency to retain (solidify?) after a given component is created, developed, and implemented.
   b. Dealing with the rigidity and isolation caused by both compartmentalization and departmentalization within the training institution.
   c. Decreasing (eliminating?) the dependence of existing statutory and rules-and-regulations frames of reference.
6. Consideration might be given to these training alternatives:
   a. The substitution of generic courses taught inductively.
   b. The training institution could (should) move the training model

off campus to the real laboratory of the school where the kids are.

c. Give priority to the "input for special education" in the design and implementation of all teacher training sequences.

d. Ask the trainees (pre-and in-service) and listen for the reply as to how they feel about their training—again and again.

e. Loosen up the sequence, i.e., move toward what we're saying we want for exceptional children in the schools: flexibility; relevance; criterion-referenced, competency-based behavior; etc.

When Saturday morning "emerged" (and it inevitably did) the input from previous General and Rap Sessions was once again enlivened with a symposium concerned with "strategies, models, and ideas for action in western colleges and universities." Ably handled by Anne Carroll (University of Denver), Marv Fifield (Utah State University), and John Mattson (Washington State Department of Education), their composite thinking reflected, in part, the following:

1. A primary need for all of us in education is increased attention to the historical perspectives that surround us. In a we/they world there is confusion, concern, uncertainty. In effect, change is occurring and many of our current problems seem related to constraints that may, in fact, be unreal or imagined. We can and should develop new perspectives.
2. Have we realistically considered the needs of the general educator regarding the exceptional learner? He has a need to communicate and make decisions also. Perhaps those of us in special education have been too enthralled with our own efforts.
3. How much honest demonstrable effort has been devoted to the introduction of change models within the college or university? Some questions arise here:
    a. How are needs and competencies meshed?
    b. Where do we find time for planning strategies?
    c. Are service delivery models matched to current projected needs?
    d. What is being done to incorporate accumulated knowledge about exceptionalities into the training sequences for the general educator?
4. Success accountability in special education is not really any better than it has proven to be in general education, and that has not been exemplary. Have we tackled the accountability factor at this conference? Could we? Should we?
5. Competency based training requires:
    a. Knowledge (baseline data and information about learning processes).
    b. Skill (capacities to demonstrate, simulate, etc.).
    c. Product (does teacher input make a difference in the learner?).
6. The real interface for the special and general educator is the individualization of instruction. Emergent concerns focus on viewing individualization as a competency for teachers:
    a. It is a difficult strategy to encompass and to manage.
    b. How can it be structured functionally? Can, in fact, learning processes be arranged sequentially for the individual?
    c. How is the match between materials and learning rate achieved?
    d. Objective observation of the learner implies complexity:
        (1) Diagnostic skills, an essentially new thing for the teacher.
        (2) Description of learning behaviors so others are aware.

(3) Monitoring, same as diagnosis at a different point in time. The foundation for feedback—pupil to teacher.

(4) Reinforcement, rewarding success, deemphasizing failure, providing useful feedback to learner, etc.

7. A promising instructional strategy is "management of objective."
   a. When teachers are not successful, the predictable behavioral attributes are guilt, frustration, failure, fear, and anxiety.
   b. An analysis of current conditions indicates that teachers have developed a tolerance for guilt; likewise, learners have developed a tolerance for failure. Together they have produced a morality that promotes fragmentation and/or divisiveness.
   c. Teacher investment (involvement?) in the diagnostic referral process produces useful feedback about the learner as a respondent. Reduction of guilt, anxiety, and frustration of both teacher and learner follows.
   d. Limited experience in Washington suggests that the "management by objective" approach can and does break down the constraints that perpetuate the established system.
   e. The teacher as "program manager" delegates to the learner responsibility, authority, and accountability. When this significant shift occurs, teacher energies can be more appropriately focused on the planning, organizing, and control components of the learning process.

The final Saturday morning Rap Session emerged as an open forum for all conferees. Perhaps a more descriptive term would be "gathering of the forces." The focus shifted frequently and with some feeling as individuals and small groups engaged in the predictable, and sought after, encounter that emerges from two days of intensive investment. The now emergent reality of the conference rather clearly suggested that had we started on Thursday with what we were now allowing ourselves to do on Saturday we would probably be somewhat closer to the goal of comprehending the complex interrelationships that Contiguity and Continuity in General/Special Education do, in fact, mean. Just as Thursday and Friday were good days, so indeed was Saturday. In fact, Saturday might be judged as better simply because the doubt and tentativeness had perceptibly diminished. Several participants noted that now was the time to really start the conference! And, as might be predicted, dissent was minimal.

Among the myriad notes and rap sessions summaries that emerged from the Portland Conference there are a few that seem to be "right-on!" These commentaries and questions signify to this writer that Contiguity and Continuity in General/Special Education are now more authentic, that criterion-referenced behavior began to be a real part of the thinking of conference participants, and that movement toward a competency-based cascade of training models has been promoted.

1. What about the now clearly discernible early age education (EAE),

early childhood education (ECE) gestalt? Are training institutions involved with the concept of education of preschool exceptional children? Are their parents and communities?

2. "Human engineering" is okay if it is in the right hands. Can the "right hands" be criterion-referenced?
3. Traditional communication nets have proven to be inadequate. Change processes demand and incorporate new systems of overt behavior in responsible adults. How can behaviors be modified to meaningfully improve basic communication?
4. Newly trained teachers come to the public schools with nerve and verve (innovation, applied research skills, comprehensive view of the learner, a dynamic view of the total learning environment). All too soon they are absorbed and behavior-modified into the obviously inept, inadequate establishment. Do we really understand this phenomenon? If not, it deserves attention—now.
5. How does competency-based performance become incorporated into a system that denies the reality of the change process?
6. The only thing worse than preservice training is in-service training. In-service training is the slum of education.
7. The mainstream? Maybe it's polluted.
8. What has general education got to offer special education?
9. We treat special education as an entity and a training model, but are we providing the general educator with the means to absorb and utilize what we have and are learning?
10. There's more "humanism" in special education. If so, what is it? Can it be discerned?
11. The attitudes and values of educators must be changed from a focus on category to an emphasis on the learner and his abilities. Educators need to make a personal commitment in instigating needed changes.

Very clear is the precept that all of us have much to contribute and learn about the emergent relationships of special and general education in colleges and universities, state departments of education, public schools, and key supportive service and community agencies in the Pacific Northwest region.

Well, there it is—one man's try.

Closure comes, sometimes, from the most unlikely sources. For me, the memory of a phrase from the writing and wisdom of naturalist John Muir has particular meaning. Perhaps it will for you, too. "When we try to pick out anything by itself we find it hitched to everything in the universe."

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